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In this issue:

Productivity in the Federal Government
U.S. share of the world wheat market
Effects on employment of devaluation of the peso
Flexible retirement in Norway and Sweden

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Henry Lowenstern, Editor-in-Chief
Robert W. Fisher, Executive Editor

Donald M. Fisk 3 **Productivity trends in the Federal Government**
From 1967 to 1983, output per employee-year posted an annual increase of 1.5 percent, with the trend in recent years showing a slightly larger rise

Todd Darr, Gerry Gribbons 10 **How U.S. exports are faring in the world wheat market**
Foreign exporters chipped away at the U.S. share of the market in 1980–85; factors in the erosion were American policies and prices, along with the strong dollar

Louis Harrell, Dale Fischer 25 **The 1982 Mexican peso devaluation and border area employment**
Unemployment in U.S. border areas peaked in 1982 after devaluation of the peso; increased employment on the Mexican side stimulates demand for U.S. goods

Helen Ginsburg 33 **Flexible and partial retirement in Norway and Sweden**
With a commitment to full employment, both countries encourage partial retirement; in Sweden workers are eligible at 60, in Norway, after the normal pension age of 67

REPORTS

Carl Prieser 44 Occupational salary levels for white-collar workers, 1985

DEPARTMENTS

2 Labor month in review
44 Research summaries
47 Major agreements expiring next month
48 Developments in industrial relations
54 Book reviews
57 Current labor statistics

Labor Month In Review

SERVICE JOBS. While columnist Leonard Silk was on vacation, *The New York Times* invited other economists to write the "Economic Scene." One of two columns by Commissioner of Labor Statistics Janet L. Norwood discussed the growth of jobs in the service sector of the U.S. economy. The column was published in *The Times* of August 28:

A huge restructuring of industry is under way in this country. Employment is declining in such goods-producing industries as steel, apparel, textiles and leather, but increasing in industries that provide services like health care, banking and merchandising. Both trends are likely to continue. Should that worry us? Not if we understand what is happening and learn to adjust to the trends.

Manufacturing employment today is nearly 900,000 below the level of 1980. Since December alone, we have lost 200,000 factory jobs. Although the economy as a whole has recovered from the 1981–82 recession, manufacturing industries as a group have recovered only 58 percent of the jobs lost during that downturn. Many of these manufacturing industries face a troubled future. And many factory workers displaced from their jobs do not have the skills to move into other industries.

In contrast to manufacturing, the service-producing sector of our economy is growing and will continue to dominate job expansion in the future. In June, 7 out of every 10 American workers were employed in the service-producing sector, while only 2 of 10 worked in the Nation's factories.

Since 1970, the number of jobs in the service-producing sector has risen to 72.4 million from 47.3 million. Among the fastest-growing industries in the United States have been business services, up 165 percent since 1970; health services, up 104 percent; and banking, with a 65-percent rise.

Such rapid change is bound to produce uncertainty about the labor market and concerns about its future. We want to know the meaning of the employment shifts in the American economy and how permanent they are.

The American factory worker long has been viewed as the backbone of the labor force, the heart of the trade union movement, and a major force in increasing the standard of living in this country. Service jobs, on the other hand, often are thought to be low-skilled, which pay little more than the minimum wage. Does this mean that we are becoming a nation of low-paid, low-skilled workers?

Let us put our employment growth into perspective. Although the number of factory jobs has not increased since 1970, compared with a whopping 53-percent rise in service sector jobs, there are still 19.4 million factory workers in this country.

Sure, we have lost some high-paying jobs in important manufacturing industries. We know that the workers displaced from these jobs are primarily men who have held them for some time, tend to have family obligations, and are not as mobile as younger workers.

But we also have lost jobs in low-paying manufacturing industries like apparel, textiles and shoes. Indeed, in a recent survey of displaced workers, we found more displaced apparel workers than displaced steelworkers. The survey showed that workers who lost jobs in industries like apparel and textiles tended to be disproportionately women and minority group members who always have a difficult time in the labor market.

The widely held notion that all jobs in the service sector are "bad" jobs is not true. Consider, for example, that the sector employs 80 percent of the country's managerial and professional specialty workers. The fact is that the service sector is so diverse that the jobs in it cannot be categorized as either high-wage or low-wage.

It is, in fact, that diversity itself that makes the service sector unique. The sector employs low-paid workers in fast-food restaurants, in personal service establishments and nursing homes. But the service sector is also the home of computer services, legal services, advertising and communications, where workers, on average, earn fairly high wages. And there are those employed in insurance, wholesale trade and auto repair who earn near-average earnings. The shift to services does not mean that we are becoming a nation of hamburger makers. Many service sector jobs are neither low-paid nor dead-end.

Moreover, occupations and earnings as well as industries are shifting. While we need more comprehensive analysis of the interaction of all of these changes, Bureau of Labor Statistics research completed thus far shows some overall shift toward higher-paying and some reduction in lower-paying occupations. And the BLS Employment Cost Index shows that, in recent years, workers in service industry jobs have had larger increases in compensation (wage and fringes) than factory workers have had.

Clearly, both the industrial and occupational mix of employment is changing in this country as well as in other countries. The trends are not so harmful as some have feared. We can live with them if we have the flexibility to minimize the hardship associated with the changes and to capitalize on their potential benefits. □

Productivity trends in the Federal Government

Output per employee-year climbed 1.5 percent annually among Federal agencies studied during 1967–83; in recent years, the trend shows a slightly larger increase

DONALD M. FISK

Labor productivity continues to be a major concern in the U.S. economy. The Federal Government is no exception.[1] It employs roughly 5.1 million people (2.9 million civilians and 2.2 million military).

For a number of years, the Bureau of Labor Statistics has collected data from selected Federal agencies and computed productivity indexes.[2] These indexes now cover 16 years, 54 Federal agencies employing 1.9 million Federal civilian employees, 401 reporting organizations, and about 3,000 different output measures. This article reports some of the results of these data.

Overall trends

During the measured period, 1967–83, output per employee-year rose at an average annual rate of 1.5 percent in the Federal sector, compared with a rate of 1.4 percent in the private sector.[3] Between 1977 and 1983, productivity increased 1.7 percent and for the preceding 5 years (1972–77), 1.5 percent.

The overall increase in Federal productivity reflects an average rise of 1.4 percent per year in output, coupled with a small decline in employee years (−0.1 percent per year). The year-to-year changes in productivity ranged from a decline of 0.5 percent in 1974 to an increase of 2.9 percent in 1977. Output increased annually at rates ranging from 0.2 percent in 1974 to 3.7 percent in 1968. Annual rates of change in employee years ranged from a drop of 1.2 percent in 1973 to a 2.6-percent increase in 1968 (table 1).

Compensation per employee-year, which comprises salaries, wages, and fringe benefits, increased at an average annual rate of 8.3 percent between 1967 and 1983, with increases ranging from 11.6 percent (1971) to 4.7 percent (1983). Unit labor cost, which reflects the interaction of changes in employee compensation and productivity, increased at an annual rate of 6.7 percent between 1967 and 1983, as productivity lagged increases in compensation. The largest increase was 10.8 percent in 1970, the smallest, 3.0 percent in 1983.

While unit labor cost has increased every year, the rate of increase has slowed: 7.6 percent between 1967 and 1972; 7.3, between 1972 and 1977; and 5.6, between 1977 and 1983. This is a reflection of both increasing productivity and smaller increases in compensation during the 1967–83 period.

Sector comparisons

For purposes of policy analysis, it is helpful to examine the Federal statistics by major sector. A sector in this context is an aggregation of organizations which have a common bond. Two such sectors, enterprise services and defense, are examined here.

Enterprise services. The Postal Service and electric power are examples of enterprise services which are sold in the marketplace and are designed to be largely self-supporting

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through fees and charges. Their market focus and discrete outputs make their outputs easily identifiable and measurable, at least when contrasted with general government.[4]

Productivity in the Federal Government's enterprise services increased at an annual rate of 1.2 percent, while that in general government increased at a more rapid rate of 1.7 percent between 1967 and 1983. However, year-to-year shifts are quite comparable: In half the years during the period, enterprise services showed greater productivity gains; in half, general government showed greater gains. There were years, of course, when the two showed substantial differences. In 1982, for example, general government increased at 2.5 percent, but enterprise service productivity decreased 0.6 percent, the latter occurring largely as a result of the productivity drop in the electric power field.

More interesting, perhaps, is the long-term trend of compensation per employee-year for enterprise services, which increased at a somewhat greater rate than that of general government (9.4 percent versus 7.4 percent). This is a reflection of the rapid increase in average annual compensation in the Postal Service. The enterprise services' faster increase in average annual compensation and slower increase in productivity is reflected in higher unit labor costs of the enterprise services vis-à-vis general government (8.1 percent versus 5.9 percent).

Enterprise service employment accounts for about 40 percent of the Federal sample (1983), with the Postal Service alone accounting for 37 percent. In most years, and certainly over the long run, the Postal Service is the driving force behind changes in enterprise service productivity and related indexes.

Defense. The rapid increase in defense expenditures in recent years has led to calls for increased productivity in this area. Currently, Defense employs about 1 million civilians, or about 38 percent of the total Federal civilian labor force. About 37 percent of the Defense Department civilian labor force is included in the sample measurements (military personnel are excluded from these ratios). Most of the measured activities are support-related, such as communications, food service, maintenance, and supply.

The rate of productivity growth in Defense organizations from 1967–83 is 1.3 percent, which is slightly less than the nondefense figure of 1.6 percent. However, the relative movements varied through time. With the winding down of the Vietnam War, Defense productivity increased at only one-third the rate of nondefense productivity (0.6 percent versus 1.5 percent). In 4 consecutive years (1970–73), productivity declined; there were large decreases in Defense employee-years but even greater cutbacks in Defense activity output.

Turning to the 1972–77 period, we find that Defense outputs continued to drop, but employee years fell even faster so that productivity increased at 1.8 percent annually. This was a slightly faster growth rate than the nondefense increase of 1.4 percent. In the most recent 6-year period (1977–83), Defense productivity has risen at a somewhat greater rate than the nondefense sector (2.1 percent versus 1.6 percent).

Throughout the 1967–83 period, nondefense compensation has risen faster than Defense civilian compensation, and Defense unit labor costs have dropped faster than those of nondefense. This is true for both long-term and medium-term trends.

Table 1. Productivity indexes for total Federal sample, fiscal years 1967–83

Fiscal year	Output per employee-year	Output	Employee years	Compensation per employee-year	Unit labor cost
1967	100.0	100.0	100.0	100.0	100.0
1968	101.1	103.7	102.6	105.1	104.0
1969	103.5	107.1	103.5	112.8	109.0
1970	104.0	107.4	103.3	125.6	120.8
1971	105.6	108.7	103.0	140.2	132.7
1972	106.3	109.0	102.6	150.3	141.4
1973	109.3	110.7	101.3	159.3	146.0
1974	108.7	110.9	102.1	172.4	158.6
1975	110.3	112.8	102.2	189.1	171.4
1976	112.2	113.7	101.3	209.1	186.3
1977	115.5	115.7	100.1	227.8	197.1
1978	117.5	118.4	100.8	243.4	207.1
1979	118.2	119.3	100.9	259.1	219.1
1980	120.8	122.7	101.6	280.5	232.3
1981	123.7	124.5	100.7	307.2	248.4
1982	125.4	126.0	100.4	327.1	260.8
1983	127.5	129.7	101.7	342.6	268.6
	Average annual rates of change (in percent)				
1967–83	1.5	1.4	−0.1	8.3	6.7
1967–72	1.3	1.7	0.4	9.0	7.6
1972–77	1.5	1.1	−0.3	8.9	7.3
1977–83	1.7	1.8	0.1	7.4	5.6

Functional diversity

To better identify and understand the forces which affect Federal productivity, we divide the Federal organizational units into 28 functional groups based on similarity of tasks performed (for example, auditing, medical, personnel, and regulation). These functional aggregations also provide a standard for managers to compare their organizations' performance. Indexes of productivity, output, employee years, compensation per employee-year, and unit labor costs are routinely computed for each function.

Long-term productivity trends for the 28 functions range from 11.7-percent annual growth for communications to 1.7-percent annual decline for electric power generation and distribution. (The overall Federal productivity trend, as noted, is 1.5 percent annually.) Most functions (26 of 28) show productivity increases over the long term (table 2).

Shifts in program emphasis and delivery of government services over the past 17 years are reflected in both output and employee-year trends. In one-fourth (7 of 28) of the functional areas, output indexes have declined. Long-term output trends have ranged from an annual increase of 10.7 percent for communications to a 3.3-percent annual decline for supply and inventory control and military base services. Long-term employee-year trends ranged from 7.1-percent

Table 2. Average annual rates of change in output per employee-year and related data, by selected functions in the Federal civilian work force, fiscal years 1967–83

Function	Output per employee-year	Output	Employee years	Compensation per employee-year	Unit labor cost
Total Federal sample	1.5	1.4	−0.1	8.3	6.7
Audit of operations	1.4	−0.9	−2.2	7.3	5.8
Buildings and grounds maintenance	3.7	1.4	−2.2	8.4	4.5
Communications[1]	11.7	10.7	−0.9	7.8	−3.5
Education and training[2]	2.0	−0.5	−2.4	7.7	5.6
Electric power production and distribution	−1.7	5.3	7.1	7.2	9.1
Equipment maintenance[2]	0.8	−1.9	−2.6	7.7	6.9
Finance and accounting	4.3	1.9	−2.2	7.5	3.1
General support services	4.8	6.6	1.6	6.6	1.7
Information services	0.7	1.1	0.5	6.2	5.5
Legal and judicial activities	0.0	4.2	4.1	6.2	6.1
Library services	4.8	7.4	2.5	8.1	3.2
Loans and grants	3.5	4.1	0.6	7.6	4.0
Medical services	0.2	2.0	1.8	7.8	7.6
Military base services	0.4	−3.3	−3.8	7.2	6.7
Natural resources and environmental management	1.2	1.5	0.3	7.1	5.8
Personnel investigations	3.3	6.3	2.9	6.9	3.5
Personnel management	1.2	3.3	2.1	5.4	4.2
Postal service	1.3	1.0	−0.3	9.5	8.1
Printing and duplication	−0.4	−2.9	−2.5	8.4	8.8
Procurement	3.1	1.8	−1.3	5.5	2.4
Records management	3.6	0.0	−3.5	6.9	3.2
Regulation–compliance and enforcement	2.5	4.7	2.2	7.1	4.5
Regulation–rulemaking and licensing	3.0	5.5	2.4	7.0	3.8
Social services and benefits	2.3	5.4	3.1	7.3	4.9
Specialized manufacturing	3.2	0.1	−3.0	8.4	5.0
Supply and inventory control	1.7	−3.3	−4.9	7.0	5.2
Traffic management[3]	2.5	−0.7	−3.1	5.7	3.1
Transportation	2.7	2.6	−0.1	8.0	5.1

[1]Fiscal years 1973–83.
[2]Fiscal years 1968–83.
[3]Fiscal years 1972–83.

NOTE: Average annual percent changes based on linear least squares of the logarithms of the index numbers.

annual increase for electric power production and distribution to an annual decline of 4.9 percent for supply and inventory control.

Compensation per employee-year rose rapidly throughout the period, as discussed earlier, with the greatest annual percentage change in the Postal Service (9.5 percent) and the smallest in personnel management (5.4 percent). Unit labor costs ranged from a 9.1-percent annual average increase for electric power to an annual average decrease of 3.5 percent for communications. Communications was the only function that registered a long-term decrease in unit labor costs.

Because of the relative homogeneity in growth in hourly compensation, those sectors having the more rapid advances in productivity generally had slower increases in unit labor costs.[5] Communications, for example, had an annual average productivity increase of 11.7 percent and a decrease of 3.5 percent in unit labor cost. At the other extreme, electric power production and distribution had an average annual productivity decrease of 1.7 percent and a rapid rise in unit labor cost of 9.1 percent.

Output and input movements among functions

The underlying output and input movements differ by function, sometimes dramatically. In the case of communications, which shows the largest increase in long-term productivity (11.7 percent), there was a very large annual increase in output (10.7 percent) with a small annual decrease (−0.9 percent) in employee years. During this period, steps were taken to install automated message processing equipment and optical character readers, and consolidate telecommunication operations.

The military base service function, which includes such activities as housing, laundry, commissary, and fire protection, shows a sizable decrease in the average annual rate of output (−3.3 percent) and input (−3.8 percent) and a slight increase in the rate of growth of productivity (0.4 percent) over the long run. Output trends in the early part of the period reflect the winding down of the Vietnam War, and, more recently, the move to contract operations to the private sector. Other functional areas with substantial Department of Defense employment, such as auditing and equipment maintenance, also show decreasing trends in output and input, particularly in the early coverage years.

Finance and accounting, which includes internal government operations such as payroll and voucher operations, and final government operations, such as Treasury bill and bond sales to the public, has shown productivity improvement in all years except for 1972 and 1973. The long-term (1967–83) average annual percent change is 4.3 percent. This increase in productivity is a reflection of a moderate increase in output (1.9 percent) and a decrease in input (−2.2 percent). In 12 of the 16 measured years, employee years have decreased.

The printing and duplication function shows an average annual decrease in output, input, and productivity. The decrease in output (−2.9 percent) reflects greater use of self-service copy centers, contracting of services, and a cutback in the number of government documents published. In response to this drop in output, employment was reduced (−2.5 percent), but the cuts in employment lagged the drop in output, and productivity decreased (−0.4 percent).

While printing and duplication productivity shows a long-term (1967–83) average annual decrease, the midterm (1977–83) and short-term (1982–83) rates have increased. This increase is a reflection primarily in the change of output growth. Between 1967 and 1972, output decreased at an annual rate of 4.3 percent, between 1972 and 1977 the decrease was 3.2 percent, and between 1977 and 1983 the drop was 0.7 percent. While output has dropped in most

years, the rate of decrease has slowed in recent years, and in 1982–83 there was a sizable increase (9.1 percent).

Electric power production and distribution, which registered the largest drop in productivity of the 28 Federal functions, has been buffeted by oil embargoes, recessions, and cutbacks in power plant construction. Productivity dropped in 9 of the 16 measured years, and sometimes dramatically. In 1982, productivity dropped by more than 25 percent, but in 1983, it increased by almost the same percent as employment was cut, while output increased. The average annual decrease in productivity between 1977 and 1983 was 6.1 percent.

Diversity of movements within functions

Although the organizations within the functional groupings perform relatively homogeneous tasks, productivity movements of the individual organizations can vary considerably, and these individual organizational productivity movements can be masked by functional aggregations. Hence, it is helpful to examine individual organizational units when assessing the forces which shape Federal productivity. Also, individual government managers are often interested in examining their own organizations' movements.

There are 333 different reporting units included in the 28 functions listed in table 3.[6] Each function, other than the Postal Service, includes 2 units or more. The function with the greatest number of individual units is regulatory compliance and enforcement which contains 50 units drawn from 19 departments and agencies. The loans and grants function contains 32 units, legal and judicial and general support each have 20, and finance and accounting has 18. Records management contains only 2.

Table 3. Average annual rates of change in productivity and related statistics by selected function, fiscal years 1977–83

Function	Number of units	Rates of change	
		Overall	Range of unit rates
Audit of operations	6	−0.7	30.4 to −8.6
Buildings and grounds maintenance	10	5.2	21.5 to −3.0
Communications	8	13.3	15.5 to 0.1
Education and training	11	2.0	12.4 to −7.3
Electric power	4	−6.1	3.3 to −7.5
Equipment maintenance	10	1.5	9.8 to −1.1
Finance and accounting	18	9.1	30.5 to −2.5
General support	20	9.1	29.6 to −7.9
Information services	16	1.9	43.2 to −11.1
Legal and judicial	20	2.3	54.1 to −17.9
Library services	7	2.1	4.3 to −7.3
Loans and grants	32	2.2	13.2 to −8.2
Medical services	10	0.7	5.9 to −2.5
Military base services	12	1.6	16.4 to −0.7
Natural resources and environmental management	11	1.9	41.9 to −13.0
Personnel investigations	3	0.3	5.2 to −3.7
Personnel management	6	−1.0	31.6 to −7.2
Postal service	1	1.2	—
Printing and duplication	16	1.9	8.2 to −5.0
Procurement	14	3.9	8.1 to −7.9
Records management	2	3.3	[1]
Regulation–compliance and enforcement	50	4.3	40.1 to −20.9
Regulation–rulemaking and licensing	7	7.3	26.9 to −23.7
Social services and benefits	6	1.4	13.8 to 1.3
Specialized manufacturing	8	5.7	9.7 to −9.2
Supply and inventory control	16	1.0	14.6 to −12.6
Traffic management	3	2.1	3.7 to −1.7
Transportation	6	2.2	12.0 to −4.9

[1] Rates not presented to assure confidentiality.

The communications function, which shows an average annual increase in productivity of 13.3 percent (1977–83), comprises 8 units, with average annual increases ranging from 0.1 percent to 15.5 percent. The communications unit, with the largest increase in productivity during this period, reflects a large increase in output, averaging 13.7 percent, and a steady decrease in employment, averaging 1.5 percent.

The military base services function, comprising 12 reporting units drawn from each of the 4 services (Army, Navy, Marine Corps, and Air Force), shows average annual changes in productivity ranging from 16.4 to −0.7 percent from 1977 to 1983. The overall average annual rate of change for this period is 1.6 percent. Most of the reporting units (10 of 12) show increasing productivity, a reflection of increasing output (8 of 12) and decreasing labor input (7 of 12). Each of the services reported on its commissary operations, and for 3 of the 4, productivity increased. For each of the 4 commissary units, output rose and in 3 of the 4 units, labor input also increased. Three of the 4 services reported on laundry and dry cleaning services, and each showed increasing productivity and decreasing labor input. According to defense supply analysts, the increasing productivity in this area is a reflection of consolidation, use of more efficient equipment, and in the case of laundry and dry cleaning, the new fabrics which require less work.

The finance and accounting function is made up of 18 units which show an average annual increase in productivity of 9.1 percent between 1977 and 1983. Most of the organizational units (13 of 18) reported positive productivity gains during this period with individual average annual productivity changes ranging from 30.5 to −2.5 percent. The index of the unit with the largest increase reflects a massive increase in output which was fostered by changing economic conditions which, in turn, prompted rapid mechanization of operations. In 1 year, output increased 111 percent. The average annual increase in output between 1977–83 is 31.1 percent. However, in 1983 the increase was only 6.4 percent. Several elements in this function reported moves to automate operations.

The 16 organizational units in the printing and duplicating function registered productivity changes ranging from 8.2 percent to −5.0 percent during 1977 and 1983, with the units roughly split between those registering positive and negative productivity change. The overall average annual rate of change is 1.9 percent. Productivity has increased for the majority of units (9 of the 16) with most outputs and inputs dropping. In 12 of the 16 organizations, output has decreased and in 14 of the 16, employment has decreased. (The two organizations registering an increase in output are

part of the Defense Department.) One organization that registered a steady increase in productivity during this period (2.6 percent) showed a decrease in output (−3.9 percent) but an even greater decrease in employment (−6.3 percent). Another organization which showed a decrease in productivity (−3.7 percent) also showed a drop in employment (−3.6 percent) but an even greater decrease in output (−7.2 percent). Most organizations have been affected by the same factors—cutbacks in government publications, moves to self-service equipment, equipment modernization, and contracting out of government operations.

The electric power production and distribution function, which comprises 4 units, shows a negative productivity trend (−6.1 percent) between 1977 and 1983. Three of the 4 organizational units show increasing productivity during this period, but it is the fourth unit that drives functional performance because it accounts for most of the labor input. This unit showed a −7.5-percent annual change in productivity between 1977 and 1983, which is a reflection of cutbacks in the demand for electricity and cancellation of power plant construction. And while labor has been trimmed by this organization, particularly in 1982 and 1983, it has not been cut back as rapidly as output has dropped.

Productivity trends, such as those discussed in this section, are a result of a number of factors. In a few cases, the dramatic midterm shifts in productivity are a result of management actions (as in communications), but in most instances (for example, electric power) these shifts are due to external forces, sometimes accompanied by management actions, sometimes entirely devoid of management response. By examining individual organizational units, it is often possible to better understand cause and effect relationships and the impact of external forces on government productivity.

Federal-private sector trends

Comparisons of Federal-private sector productivity trends provide yet another perspective of productivity change in the Federal Government. With the increasing interest in contracting for government services and the discussion of the efficiency of government vis-à-vis the private sector, comparisons between the two sectors are inevitable. They can also be informative and helpful to managers and policy makers.

Comparisons can be made both by economic sector and by detailed industry level. The aggregate comparison presented here is of the total private business sector and the total Federal Government sample. But, such a comparison does raise several conceptual issues. First, the private output index is a net measure of all private business in the United States, while the Federal output index is a measure of the gross output of a nonrandom sample. Second, the output mix is quite different. The private business output reflects both goods and services, while the Federal output is comprised mostly of services. Third, private business outputs reflect final organizational outputs from the perspective of the business sector, while the Federal output reflects both final Federal outputs, that is, those that are consumed by the public, and intermediate outputs, that is, those consumed within the Federal Government such as personnel operations.

With these limitations in mind, the overall statistics show little difference between Federal (1.5 percent) and private sector (1.4 percent) productivity trends between 1967 and 1983. However, the rates do vary by time period examined. Private business sector trends grew more rapidly in early years, and the Federal Government trend grew more rapidly in later years. Also, the growth in outputs and inputs differs between the two sectors. Federal labor inputs, as noted earlier in the discussion, have remained roughly constant (−0.1 percent) through the measured period, while the private business sector has increased at 1.4 percent per year. In the case of outputs, the private business sector has increased 2.8 percent annually, while the Federal Government increased at 1.4 percent.

More interesting, perhaps, are the 5-year trends which show measured Federal sector productivity rising at a faster rate while private business sector productivity is increasing at a slower rate. Compensation movements show the opposite. The productivity and compensation trends are reflected in unit labor costs, which show Federal increasing at a slower rate and private increasing at a faster rate.[7]

More meaningful comparisons, perhaps, can be made at the individual private industry-government function levels. That is, there are a number of areas, such as medical, printing, and electric power, where the Federal Government and private industry produce similar outputs. Productivity indexes are currently calculated and published by BLS for about 130 industries. The underlying output measures for these indexes use the same "gross" basis as those used for the Federal sector.

However, a problem with making this comparison is that most of the available industry productivity measures are in manufacturing while most Federal measures are in service areas. There are only two Federal functions, communications and electric power, that have identifiable private industry counterparts and for which productivity indexes are routinely calculated.

In the case of communications, Federal and private sector productivity have both increased rapidly during the measured period. Over the long run (1973–83), productivity in Federal communications rose 11.7 percent annually, while productivity in private sector communications increased 6.6 percent.[8] Over the midterm (1977 to 1983), Federal communications also increased more rapidly (13.3 versus 6.0 percent), but in the short term (1982–83), productivity in the private sector increased more rapidly (12.7 versus 7.3 percent). In short, the Federal and private productivity trends in communications move in the same direction although the magnitude of the movements differs, favoring the Federal

Government in the long term, but most recently favoring the private sector.

Federal and private sector electric power productivity trends display a somewhat different pattern. Over the midterm (1977–83), productivity trends decreased for both while over the short term (1982–83), they increased. However, over the long term (1967–83), Federal productivity decreased (−1.7 percent) while in the private sector productivity increased (2.0 percent).[9] Both outputs and inputs increased for the Federal Government and the private sector over the long run, and both have been affected by oil embargoes, inflation, recessions, high interest rates, and reductions in nuclear power plant construction.

Federal-private productivity trend comparisons such as these are interesting and can be illuminating, but they need to be used with caution for the reasons noted earlier. Such comparisons should be more meaningful and useful in the future as private sector industry measures are expanded into new areas, such as medical services and printing, and the measures and measurements are improved in the Federal sector.

Outlook

Insofar as the future is concerned, overall Federal trends should follow past patterns. Overall productivity is likely to continue its steady upward movement in response to relatively constant employment and steady increases in output. Federal employment is likely to remain fairly constant in the future as it has in the past as a result of the continuing interest in controlling the number of Federal employees. Federal personnel ceilings, elimination of some activities, contracting of other operations, and introduction of new technology all work to limit the number of Federal employees. Federal output, however, is likely to continue its steady, upward movement in response to growth in defense programs and some of the domestic programs such as Social Security, Internal Revenue, and the Postal Service.

The overall annual rate of change in Federal compensation has paralleled the rate of change in the overall economy and this long-term trend can be expected to continue. Federal law requires comparability of pay between the Federal and private sector, and in several large Federal employment areas, including the Postal Service and the Government Printing Office, compensation is negotiated.[10] Furthermore, general competition in the labor market helps ensure that Federal and private sector compensation move in the same general direction over time.

Projecting productivity trends of sectors, functions, and individual organizations is much more difficult than projecting overall Federal trends. Whereas the overall trends are influenced by a number of different, often conflicting factors, individual functions and units are often heavily affected by a single factor. For example, communications productivity has been heavily influenced by technological change; electric power has been affected by factor price shifts; printing operations have been reduced by internal government directives; and loans and grants have been influenced by revised laws and regulations. Because of the impossibility of foreseeing the size, scope, and timing of economic, political, and technological events, it is difficult to predict the movements of individual sectors, functions, and organizational units.

IN SUMMARY, it is probable that productivity will increase in most sectors and functions and many organizations, but there will be large annual fluctuations in each from time to time. These changes, of course, are masked in overall Federal productivity trends, which should continue in much the same fashion as they have in the past. □

——*FOOTNOTES*——

[1] *Management of U.S. Government, Fiscal 1986* (Government Printing Office, 1985).

[2] For a discussion of past results and measurement concepts, see Joint Economic Committee, *Hearings: Federal Productivity* (Government Printing Office, 1974); Charles W. Ardolini, "Federal Sector Productivity Measurement," *Selected Papers from North American Conference on Labor Statistics,* May 1980, pp. 49–60; Jerome A. Mark, "Measuring Federal Productivity," *Civil Service Journal,* January–March 1979, pp. 20–23; Charles W. Ardolini and Jeffrey Hohenstein, "Measuring Productivity in the Federal Government," *Monthly Labor Review,* November 1974, pp. 13–20; Joint Economic Committee, *Measuring and Enhancing Productivity in the Federal Sector* (Government Printing Office, 1972); "Productivity Measures: Industries and the Federal Government," *BLS Handbook of Methods,* Bulletin 2134–1 (Government Printing Office, 1982).

[3] All average annual rates of change are based on the linear least squares trend of the logarithms of the index numbers.

[4] Because of their market orientation and discrete outputs, Federal enterprise services are included in aggregate private sector productivity calculations as well as in the government indexes discussed here. See "Productivity Measures: Business Economy and Major Sectors," *BLS Handbook of Methods,* Bulletin 2134–1, pp. 93–7.

[5] The coefficient of correlation between productivity and unit labor cost is .93.

[6] These 333 units are all units reporting 3 or more years of data between fiscal 1977–83. A reporting unit may include more than one organizational unit; for example, the Air Force libraries are reported as one unit although there are more than 50 separate libraries included. Outside the Department of Defense, most organizational units are the same as the reporting unit.

[7] The periods examined here are 1967–72, 1972–77, and 1977–82.

[8] *Productivity Measures for Selected Industries, 1954–83,* Bulletin 2224 (Government Printing Office, February 1985), pp. 236–37.

[9] *Ibid.,* pp. 240–41.

[10] For the latest data from the survey of pay for professional, administrative, technical, and clerical occupations (PATC) in medium and large firms, see Carl Prieser, "Occupational salary levels for white-collar workers, 1985," elsewhere in this issue.

APPENDIX: Federal Government measurement techniques

The productivity indexes in this study are output per employee-year measures which show changes in the relationship between the output of the sample unit and the labor input associated with the production of the output. The output per employee-year index is derived by dividing the output index by the employment index.

The indexes of output per employee-year relate individual organizational output to the labor required to produce the output, but do not measure the specific contribution of labor, capital, or any other factor of production. Rather, they reflect the joint effect of many influences including changes in technology, capital investment, capacity utilization, office design and layout, skill and effort of the work force, managerial ability, and Federal legislation and regulation.

Federal output measures reflect final outputs of the organization being measured. These include outputs which leave the Federal Government, such as those of the U.S. Postal Service, and outputs that are consumed by other parts of the Federal establishment, such as personnel and supply services.

The Federal employment index represents the number of full-time-equivalent employees which is based on an hours paid equivalent of 2,080 hours per year. It includes all paid time; overtime, vacation, holidays, and sick leave. Part-time or seasonal employment is included on a full-time-equivalent base. All employee years are considered homogeneous and additive, and, thus, the index does not reflect changes in the qualitative aspects of labor, such as skill and experience.

The Federal compensation index includes wages, salaries, and benefits including retirement, merit pay increases, incentive pay, health insurance, and the like. Private sector compensation indexes also include wages, salaries, and benefits. The unit labor cost index for both the Federal Government and the private sector is derived by dividing the index of compensation by the index of output.

The U.S. Government's fiscal year is the reference year for all data and indexes. Through fiscal 1976, the fiscal year was July 1–June 30; beginning with fiscal 1977, the period was shifted to October 1–September 30. Data for the "transition quarter," July 1–September 30, 1976, are excluded from all indexes and statistics.

Additional data and charts are available by requesting the *Fiscal 1983 Federal Government Productivity Summary Data* from the Office of Productivity and Technology, Bureau of Labor Statistics, Washington, DC 20212.

The greening of productivity analysis

The groundwork for a more sophisticated program of industry productivity measures was laid in 1926, when [BLS Commissioner Ethelbert] Stewart brought Ewan Clague from the University of Wisconsin to direct a special project. For data on output, the work drew on the biennial Census of Manufactures supplemented by more current figures available from the Department of Commerce. Employment data came from the Bureau's monthly series. In 1926, the Bureau published output per man-hour measures for the steel, automobile, shoe, and paper industries. In 1927, measures were published for 11 additional industries. More extensive case studies of particular industries, such as the glass industry, also included output per man-hour measures.

—JOSEPH P. GOLDBERG AND WILLIAM T. MOYE
The First Hundred Years of the Bureau of Labor Statistics,
Bulletin 2235 (Bureau of Labor Statistics, 1985)

How U.S. exports are faring in the world wheat market

Foreign exporters chipped away at the U.S. share of the international market between 1980 and 1984; noncompetitive U.S. prices and the strong dollar were factors in the erosion, although Federal agricultural policies and aggressive marketing by competitors abroad also played a part

TODD DARR AND GERRY GRIBBONS

In January 1985, a major U.S. grain merchant announced plans to import foreign wheat for processing in the Midwest.[1] Prices for this wheat were below those quoted by any U.S. supplier. While the unprecedented plan was canceled due to strong protests from agricultural interest groups, it provides an extreme example of what many in the U.S. agricultural community claim is a growing problem—the erosion of the U.S. share of the world wheat market. The likelihood of similar incidents in the near future has caused a great deal of concern among export-dependent U.S. wheat farmers, currently burdened with huge excess stocks, and policymakers in the process of preparing the 1985 farm bill.

Although U.S. wheat exports were more than $6 billion in marketing year 1983/84, making up one-sixth of the total value of the Nation's agricultural exports, they had declined over the last 3 years, according to U.S. Department of Agriculture figures. From a peak of 48.8 million metric tons in 1981, wheat exports fell 22 percent to 38.1 metric tons in the 1983/84 marketing year. Much of this decline has been attributed to U.S. export prices, which are above those of other major exporting countries. Significantly, the decline in exports occurred even though U.S. export prices for the five major classes[2] of exported wheat trended downward over the 1980–84 period.[3] (See chart 1.)

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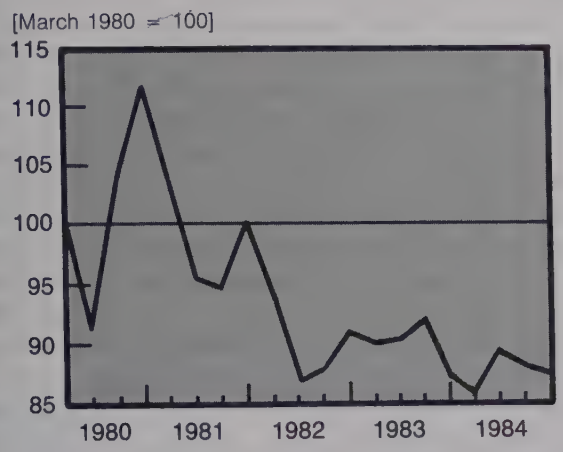
The United States relies heavily on exports to maintain the vitality of its wheat industry. Therefore, this article attempts to ascertain the trend of U.S. wheat prices relative to the price trends of other major participants in the world wheat market. Recent international developments are reviewed in terms of the activities of each of the major participants in the world wheat trade—the United States, Argentina, Canada, Australia, and the European Community—with special emphasis on the last 5 years. A simple linear regression model is employed to determine whether a particular country's prices declined relative to U.S. prices at a statistically significant level between 1980 and 1984, and the degree of the decline if present.

The world wheat situation

Of all internationally traded grains, wheat accounts for the largest land area; almost 22 percent of the world's croplands are devoted to its production.[4] Output of wheat worldwide in the 1983/84 marketing year was 490 million metric tons, surpassing records set in the previous 3 years, and amounting to a 40-percent increase since 1975. The People's Republic of China, the Soviet Union, the United States, the European Community,[5] and India, in that order, have led the world in production over the last several years. China, for instance, boosted its production capabilities by over 26 million metric tons between 1980 and 1984. In China and elsewhere, much of the increase in production may be at-

Chart 1. U.S. wheat export price index, weighted quarterly averages, 1980–84



tributed to improved production practices and the active role taken by some governments to improve the international competitiveness of their agricultural sectors.

These efforts to increase production have been met by increased world demand for wheat, with the result that world trade in the commodity has more than doubled since 1960. From slightly over 40 million metric tons in the 1960/61 marketing year, international trade has increased steadily over the last two decades; in 1981/82, more than 100 million metric tons crossed national borders for the first time in history.

Demographic and economic factors mainly account for the significant rise in demand for wheat. For example, there has been rapid growth in both population and disposable income in many importing countries, particularly the petroleum-exporting and middle-income developing countries. Simultaneously, there has been a massive population shift in many of these countries from rural areas to cities. These phenomena have resulted in a greater sophistication about foods and increased demand for staple foods, like bread.

Climatic conditions have also fueled demand for wheat. Over the last 20 years, the nations of central Africa, at one time largely self-sufficient, have faced severe droughts which curbed domestic production and forced them to look beyond their borders for grain to feed their rapidly increasing populations. Weather conditions in the 1970's forced the Soviet Union to import wheat, which significantly increased activity on the world market. Another factor boosting world demand has been the special efforts of several countries, including the United States, over the last 10 years to encourage developing nations to import wheat through food aid programs. For example, the United States, through its Food for Peace program (Public Law 480), provides wheat and other agricultural commodities to developing countries under loan terms considerably more favorable than those prevailing in the commercial market. Additionally, Egypt and Brazil have programs which subsidize imported wheat for consumers.

Another interesting trend in the world wheat market in recent years is the decline in import activity of developed countries and the simultaneous increase in imports by centrally planned economies. European Community (EC) imports dropped by about 44 percent from the early 1970's to the early 1980's, as this group of nations steadily worked toward self-sufficiency. This decline is most marked for marketing years 1979/80 to 1983/84, during which EC imports of wheat fell almost 25 percent. On the other hand, imports by most of the centrally planned economies of Eastern Europe have risen steadily over the last several years. In particular, the Soviet Union increased imports dramatically in the last 5 years, from 12.1 million metric tons to 20.0 million metric tons, or 65 percent. This development was precipitated by poor harvests and the Soviet decision to import grain rather than modify domestic consumption patterns. The import decisions led to trade agreements with the United States and a number of other grain exporting countries. In addition, China entered the world wheat market in the last 5 years as a significant buyer. Imports by that nation increased from 2.2 to 10.0 million metric tons, or by 350 percent, over the last decade, largely because of the normalization of relations with the West.[6]

Another major importer of wheat is Japan. Annual purchases averaged 5.7 million metric tons, 6 percent of the total volume of world wheat imports, for the last 5 years. The rise in Japanese imports was most dramatic in the early 1970's, as income levels in Japan grew and the Japanese began to consume more western-type foods such as bread and noodles. However, imports leveled off over the period 1980–84, rising incomes evidently no longer spurring the demand for wheat.

Export markets for wheat are much more concentrated than import markets. While the four major importers—Japan, China, the Soviet Union, and the European Community—accounted for only 40 percent of all imports in 1984, export markets are almost totally dominated by five producers: The United States, Canada, the European Community, Australia, and Argentina produced 95 percent of all wheat exported in the 1980–84 period.

Over this same 5-year span, two of the three traditional leaders in world wheat exports experienced considerable declines in market share. U.S. exports fell from 43.2 to 37.6 percent of total wheat exports and Australia's share declined from 17.3 to 11.8 percent, while Canada raised its share from 17.4 to 20.2 percent. Meanwhile, Argentina and the European Community, whose exports were considered negligible in the world wheat market before the late 1970's, boosted their market shares from 5.6 percent to 9.3 percent and from 12.0 percent to 15.8 percent, respectively. For marketing year 1984/85, the decline in U.S. market share is forecast to cost the Nation an estimated $900 million in

export revenues, and Australia, an estimated $880 million. On the other hand, Canada will gain $450 million, Argentina, $596 million, and the European Community, $613 million in increased revenues.[7]

These figures may be better expressed in terms of class-specific markets because, contrary to popular belief, wheat is not a uniform commodity and is identified as belonging to one of several classes, depending on certain product characteristics.[8] Each country tends to specialize in one particular class, with slight variations in characteristics from exporter to exporter. (See table 1.) Class designations are not rigid, however, with hard wheat varieties, including durum, substitutable for other hard wheat varieties, while the soft varieties, including white wheat, may be readily interchangeable with other soft wheat varieties. And, depending upon the use of the wheat, the hard wheats and the low protein and less desirable soft wheats may be substituted for one another. The United States, unlike its major trading partners, exports every class of wheat. Canada, Australia, the European Community, and Argentina each export one predominant class that is in direct competition with one of the U.S. classes, which places the United States in a unique position in the world wheat market.

U.S. performance, 1980–84

The breadth of its product range means that the United States competes with one or more of the major exporters in every major market and in every class of wheat that it exports. Because each exporting country has attempted both to boost exports to traditional markets and to penetrate growing markets in the developing and centrally planned economies, the position of the United States relative to that of other major exporters changed considerably from 1980 to 1984. The following discussion briefly examines developments over this 5-year period.

Argentina and the United States both are exporters of hard red winter wheat, competing directly in all import markets for that commodity class. The Asia/Oceania/Middle East[9] market is the most important market for these countries, and growth in Argentine exports has far outpaced U.S. gains in this region. (See table 2.) Within the region, China and the Soviet Union are the major importers. Both Argentina and the United States have been successful in the growing Chinese market, each increasing exports by well over 100 percent. However, the situation vis-à-vis the Soviet Union has been disappointing for the United States. The Nation's wheat exporters have never totally regained market share lost during the Government's 1980–81 grain embargo because other wheat exporters have taken up the slack and added to their market shares as the Soviet Union increased imports. U.S. export sales of hard red winter wheat to the U.S.S.R. declined by almost 6.4 percent between 1980 and 1984, while Argentine sales increased by 79 percent. Argentina has also sought to enhance trade with neighboring Brazil, Bolivia, and Peru in the last 2 years. South American countries, traditionally strong markets for U.S. hard red winter wheat, have increased imports from Argentina and are likely to continue to do so in the near future.[10]

Canada, which almost exclusively exports hard spring wheat that competes with U.S. hard red spring and hard red winter wheat, has also attempted to increase market share in South America. Millers in Brazil have started to substitute Canadian hard red spring wheat for U.S. hard red winter wheat in the making of bread and noodles. This substitution is largely responsible for the 39-percent increase in Canada's volume of shipments to Brazil over the study period, compared with a mere 3-percent increase in U.S. shipments. (See table 2.) Another area of opportunity for Canadian exporters has been the Asia/Oceania/Middle East market. Canada has been the major vendor of hard red spring wheat to this region, exporting 67 percent of its total 1983/84 volume there, and has made a concerted effort to maintain and expand its share of this market. Over the 1980–84 period, Canada increased its volume of exports to the Soviet Union by 219 percent, and to China by 43 percent. The only major market for U.S. hard red spring wheat in this region is Japan. Even though the United States does not export hard red spring wheat to the Soviet Union, the increased volume of Canadian hard red spring wheat shipments has undoubtedly affected the U.S. sale of hard red winter wheat to the Soviet Union because of the high degree of substitutability between the two types of wheat. Other markets in which the United States and Canada compete have remained stable in terms of market share over the last several years.

The United States exports white wheat on the world market that competes with white wheat from Australia, the

Table 1. Distribution of wheat exports by class for the major exporting countries, marketing year 1982/83

Country	Wheat class	Percent of total exports[1]
Canada	Western red spring	76.7
	Canadian utility	5.6
	Durum	12.9
	Alberta winter	1.1
Australia	Prime hard	10.6
	Hard	13.5
	Standard white	73.1
	General purpose	2.8
European Community	Soft wheat	91.1
	Durum	7.0
Argentina	Hard red winter (trigo pan)	98.6
	Durum (trigo fideo)	1.2
United States	Hard red winter	44.6
	Soft red winter	22.4
	Durum	3.5
	White	14.7
	Hard red spring	16.7

[1]Entries for each country may not sum to 100 percent because wheat classes representing less than 1 percent of the total are excluded.

SOURCE: International Wheat Council and Eurostat.

Table 2. Annual volume of wheat exports for major exporting countries, by product class and destination, marketing years 1979/80—1983/84

(In thousands of metric tons)

Trade region	Product class, exporting country, and marketing year									
	Hard red winter wheat									
	Argentina					United States				
	1979/80	1980/81	1981/82	1982/83	1983/84	1979/80	1980/81	1981/82	1982/83	1983/84
Total	4,748	3,932	4,281	7,471	9,592	18,591	17,653	19,637	17,134	17,127
West Europe	51	116	22	52	223	873	917	894	346	798
East Europe	—	—	—	—	206	1,573	255	22	—	—
Asia/Oceania/Middle East	2,574	3,392	3,597	6,846	7,071	8,494	8,775	10,672	10,974	10,176
U.S.S.R.	2,021	2,975	3,104	4,218	3,614	4,422	3,000	6,539	3,374	4,141
China	465	200	199	1,956	1,010	415	1,693	115	386	1,368
Africa	36	—	109	36	142	2,018	1,875	1,719	1,529	1,749
Western Hemisphere	2,087	424	554	537	1,881	5,633	5,831	6,330	4,285	4,404
South America[1]	2,072	392	554	497	1,465	2,120	2,157	2,961	2,113	2,181
	Hard red spring wheat									
	Canada					United States				
Total	14,958	17,016	17,751	21,120	20,926	5,539	4,846	5,530	6,260	5,647
West Europe	2,503	2,352	2,157	2,164	2,192	1,561	1,458	1,660	1,257	1,250
East Europe	1,637	1,244	1,525	1,036	193	—	—	—	—	—
Asia/Oceania/Middle East	7,140	9,803	9,987	14,276	14,049	2,649	2,067	2,409	3,202	2,648
U.S.S.R.	1,806	4,464	4,779	6,953	5,761	—	—	—	—	—
China	2,621	2,911	2,991	4,242	3,737	—	—	—	—	—
Japan	1,300	1,463	1,335	1,357	1,403	853	888	831	987	1,010
Africa	1,006	1,032	1,441	875	1,764	238	167	204	337	272
Western Hemisphere	2,671	2,585	2,635	2,767	2,728	1,059	1,154	1,257	1,464	1,477
Brazil	1,034	1,426	1,204	1,481	1,433	—	—	—	—	—
	White wheat									
	Australia					United States				
Total	15,364	11,088	11,405	8,530	11,695	4,960	6,708	7,300	5,578	5,541
Western Europe	1	23	—	—	—	5	9	16	57	16
East Europe	102	—	—	—	36	13	164	—	—	—
Asia/Oceania/Middle East	13,297	9,017	9,614	6,558	9,757	4,560	4,910	4,625	4,182	4,625
U.S.S.R.	2,741	2,465	2,348	1,004	1,596	—	—	—	—	—
China	3,575	1,397	1,413	1,170	1,758	379	732	5	—	—
Japan	1,068	914	943	934	1,004	1,073	1,225	1,193	1,049	1,126
Africa	1,964	2,048	1,785	1,939	1,902	290	1,403	2,483	1,331	852
Egypt	1,689	1,846	1,587	1,819	1,703	([2])	1,135	2,483	1,331	807
Western Hemisphere	—	—	—	32	—	92	222	176	8	48
	Soft wheat[3]									
	European Community					United States				
Total	10,270	12,683	13,990	14,085	13,681	4,098	8,390	12,391	8,360	5,593
Western Europe[4]	319	596	511	182	358	364	456	1,274	324	413
East Europe	1,441	2,108	3,158	1,742	1,418	1,188	721	425	122	283
Asia/Oceania/Middle East	3,363	3,364	3,872	6,997	5,414	1,014	6,213	8,901	5,791	1,809
U.S.S.R.	685	717	1,727	3,396	4,072	—	—	—	—	—
China	90	607	116	1,410	127	800	6,158	7,830	4,938	1,549
Africa	4,930	6,143	5,755	4,396	5,972	1,270	727	1,360	1,564	2,502
Egypt	1,619	2,362	1,050	1,063	2,062	—	—	—	—	—
Algeria	564	329	725	673	1,397	—	—	—	—	—
Western Hemisphere	198	377	665	748	384	211	273	433	559	580

[1]Estimates for the United States pertain only to trade with Brazil, and exclude transactions with other South American countries.

[2]Data not available.

[3]Defined as soft winter wheat for the European Community and as soft red winter wheat for the United States. Does not include white wheat.

[4]Excludes intra-EC trade.

world's other major producer of that commodity. No perceptible change in U.S. and Australian market shares occurred in the 1980–84 period except in Africa, where U.S. exports increased 193 percent. (See table 2.) The U.S. exports white wheat primarily to the Asia/Oceania/Middle East region, where no significant changes in the Nation's market share have occurred in recent years. While Australian exports to the region dropped by 27 percent between 1980 and 1984, the displacement came primarily from increased imports of European Community soft wheat, a good substitute for white wheat.

The European Community: a unique case

The European Community, a political and economic organization composed of 10 independent European countries, presents a unique situation in the world wheat market. These countries, while engaging independently in trade in wheat as well as all other products, operate under an agreement called the Common Agricultural Policy, which regulates trade among the member nations as well as with other nations. In adhering to this policy, member countries seek to increase their agricultural productivity, ensure a fair stan-

dard of living for the agricultural community, stabilize markets, and assure the availability of supplies at reasonable prices.

To ensure that these objectives are met, all EC member states operate as a single market with identical instruments of market organization and with common management of the market by the Community. The policy provides preference to member countries in all trade transactions in order to protect the internal market from low-price imports and excessive world market fluctuations. The policy was first applied to wheat and other grains in 1962 with the issuance of Regulation 19.

Regulation 19, as amended many times since 1962, is a highly complex mechanism which ensures that internal preference is given to Community wheat and other grains. A simplified description of the system begins with the setting of a "target" price at the beginning of the marketing year, August 1, by the Agricultural Ministers of the Community. This price represents the desired domestic price for wheat according to policy goals. At any time, actual prices may be higher or lower than the target price, depending upon the supply and demand situation. However, if prices fall below a critical price, the Community intervenes to stabilize the market by purchasing wheat at a predetermined "intervention" price which represents a guaranteed floor price for Community producers. To discourage imports of lower-priced wheat from nonmember countries, levies are charged. To determine the levy amount, a "threshold" price is calculated so that the price of the imported wheat at the major consumption centers, including freight and unloading costs, approximates the target price. The amount of the levy, then, is the difference between the threshold price and the import price.

Exports of Community wheat are often subsidized. Exporters are refunded all or part of the difference between the market price in the Community, including freight costs to the port of export, and the actual price on the world market. The determination of the refund amount by the Cereals Management Committee is a judgmental process depending upon the country of destination, the prices and availability of wheat on the Community and world markets, as well as political and other considerations. In addition, "correctives" or premiums may be added to a given refund to account for anticipated developments on world markets.

The policy of subsidizing wheat exports of member countries presents a problem in analyzing price behavior for the European Community. Because many continuously changing variables determine the amount of the subsidy, it is extremely difficult, if not impossible, to determine an actual price for wheat exported by EC members. Generally speaking, however, export prices of Community wheat declined over the 1980–84 period as EC domestic prices fell and the U.S. dollar grew stronger.

While EC price data are not available for analysis, quantity data do provide some basis on which the international trade situations of the United States and the Community can be compared. Production of Community wheat has gradually increased over the last decade, a primary goal of the Common Agricultural Policy. Along with this development, there has been a vigorous effort to expand export markets. Exports of Community wheat increased steadily from slightly over 8.6 million metric tons in the 1975/76 marketing year to almost 16 million metric tons in the 1983/84 year, or by 86 percent. (See chart 2.) Much of the rise can be attributed to an aggressive export policy, including the development of long-term agreements which provide discounts to foreign purchasers of Community wheat, and attention to expanding export markets as opposed to developing domestic demand.

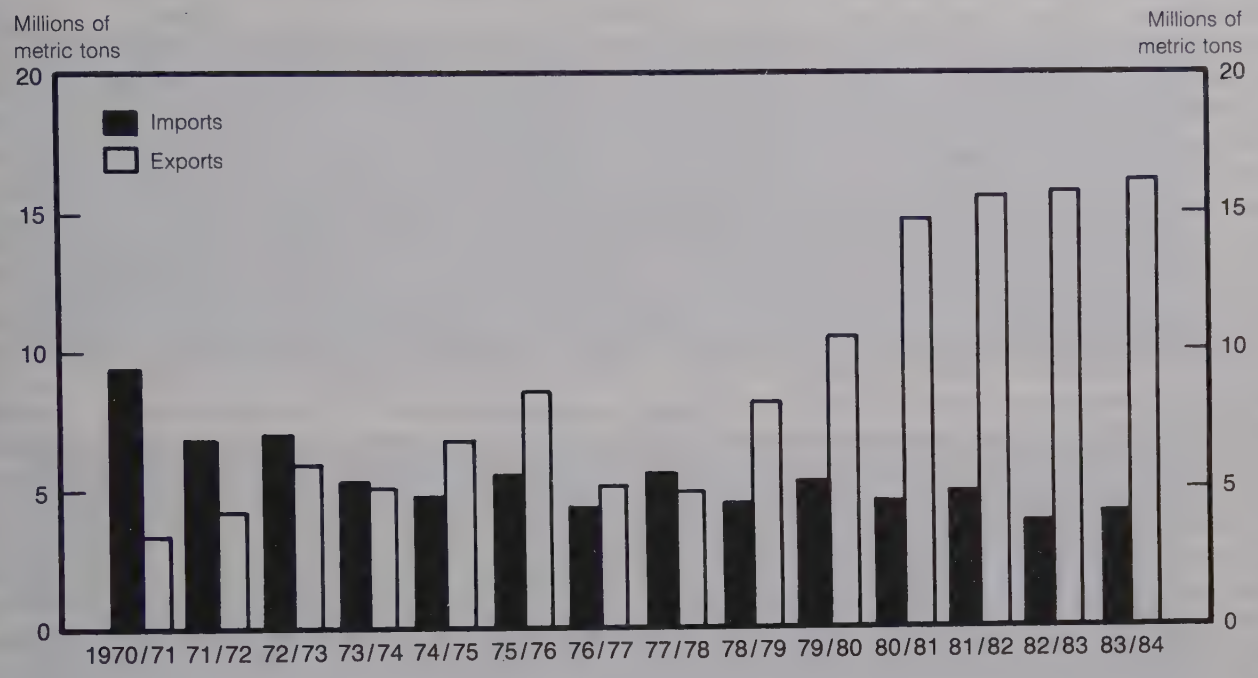
Most of the increase in EC exports, 91 percent, has been in the soft wheat class, which competes in most markets with U.S. soft winter wheat. (See table 2.) In recent years, France has led the Community in soft wheat production with approximately 70 percent of total EC wheat exports, followed by West Germany with 10 percent. New or expanded export markets for Community soft wheat have developed mainly in the Soviet Union, China, and Algeria. The Soviet Union increased imports of Community soft wheat by more than 3 million metric tons, 494 percent, over the 5-year period 1980–84. Imports by China and Algeria of Community soft wheat rose 41 and 148 percent, respectively. In China and the Soviet Union, the Community did not have a significant market share prior to 1980. Notable, but sporadic, increases also were recorded in EC exports to Egypt and Brazil.

China became a significant buyer of both EC and U.S. soft wheat in the 1980/81 marketing year, but this market has contracted greatly since 1981/82 when China began raising domestic production. While the EC increased worldwide market share, its share in China decreased by 2.5 percent between 1980 and 1984. However, the 1982/83 marketing year did see a dramatic increase of 1.3 million metric tons exported by the EC to China, compared with a decline of roughly 3.0 million metric tons for the United States.

While recent years have seen the Soviet Union increasing imports of soft wheat, none of it has come from the United States. Prior to 1980, East European countries imported over a million metric tons of U.S. soft wheat, but this volume had declined 76 percent by 1984. European Community exports to Eastern Europe remained stable in terms of volume over the same period, but there was a considerable increase in EC market share as U.S. volume declined.

The Community's expansion into new and existing export markets is not the only factor influencing U.S. exports of wheat. After the EC achieved self-sufficiency in the late 1970's, its imports of U.S. wheat, mostly hard spring and winter wheats, fell approximately 25 percent through the 1983/84 marketing year. U.S. exports to the Community are projected to decline further in the foreseeable future, according to U.S. Department of Agriculture forecasts.[11]

Chart 2. European Community imports and exports of wheat, marketing years, 1970/71–1983/84



SOURCE: U.S. Department of Agriculture, Foreign Agriculture Service.

The drop reflects the accomplishment of other major goals of the Common Agricultural Policy, namely, the improvement of domestically produced wheats to the point where they are of high enough quality for breadmaking and other routine food production uses, and the adaptation of the milling process to Community soft wheat. The Community now limits its imports to small quantities of very high protein wheat from the United States and Canada and medium protein hard wheats from Argentina. A final factor leading to the decline of U.S. wheat imports by the Community was the suspension in marketing year 1983/84 of a reexport program that had been heavily used by Community flour producers since 1969. This program had allowed Community millers to import foreign wheat without levy and to export an equivalent amount of flour without subsidization.

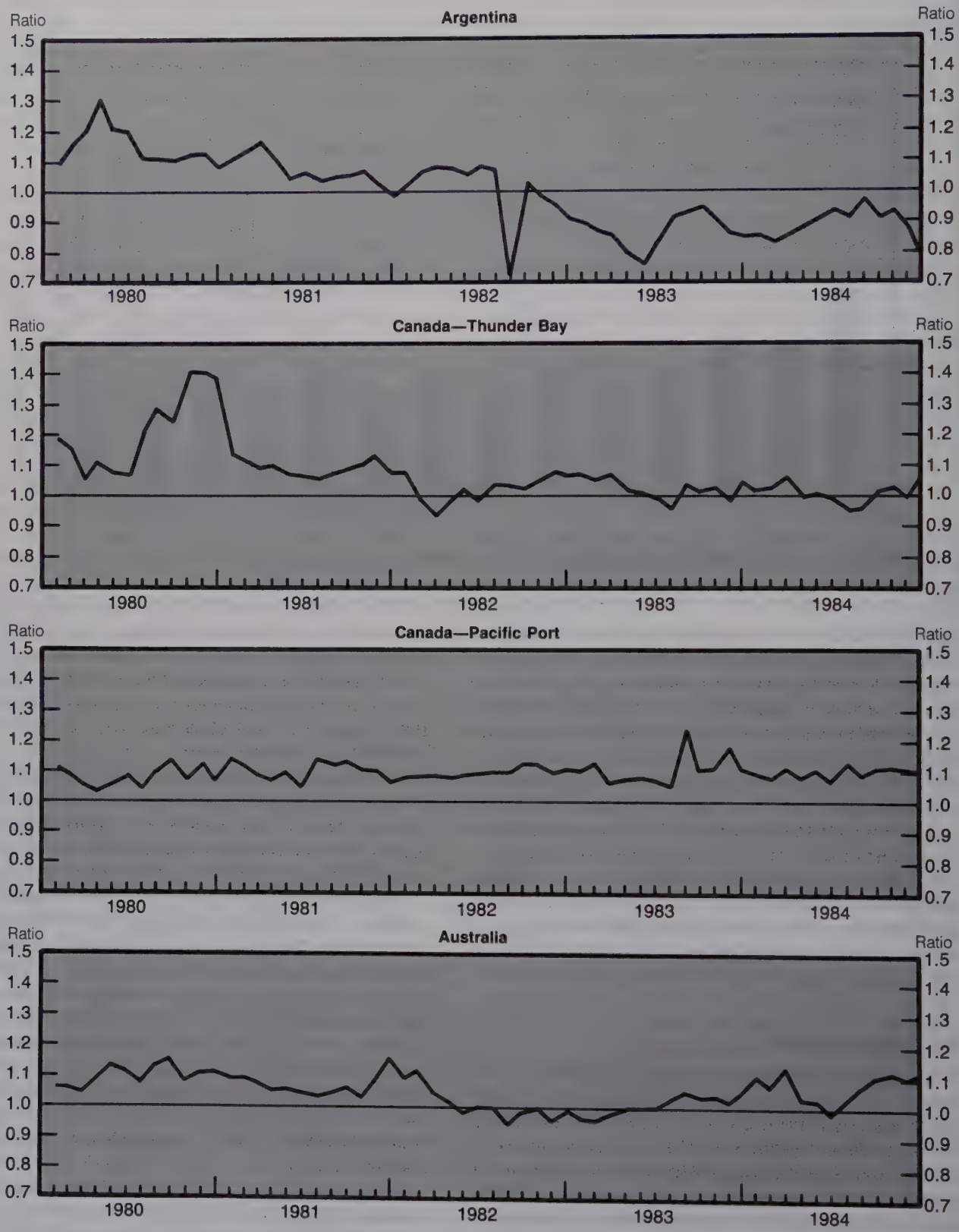
Regression analysis

Price data for this study were gathered by the U.S. Department of Agriculture on a daily basis for the major U.S. wheat classes and for Argentine, Australian, and Canadian wheat classes competing with U.S. classes on the world market. Because of the nature of the European Community's system of export restitution, an accurate price series for exports of EC soft wheat could not be found or confidently calculated. Daily prices for the first week of each month were averaged to arrive at a monthly price used for analysis. Ratios of Argentine, Canadian, and Australian export prices to U.S. prices for comparable classes of wheat were calculated on a monthly basis for a 5-year period beginning in 1980. These prices reflect all transportation and handling costs to dockside (f.o.b. port).[12]

The United States and Australia, in most cases, do not have any one dominating port from which they ship wheat, although the Gulf ports handle most of the traffic in this country. Prices for the particular wheat classes used in this analysis represent weighted averages of the prices at the major ports in the United States and at the western ports in Australia. Canada has two main port areas for wheat, Vancouver on the Pacific coast and Thunder Bay on Lake Superior, which together handled approximately 80 percent of all its wheat exports in 1982/83. Roughly equal amounts of Canadian western red spring wheat departed from these ports in 1984. Because prices vary significantly between these two port areas, they were compared to U.S. prices separately. Argentine prices are determined at the port of Bahía Blanca. The movement of wheat prices for the major foreign exporters relative to those for comparable U.S. wheat classes is shown in chart 3.

These ratio series exhibit much apparently unsystematic variation. To separate the systematic trend in prices from random movement, a linear regression model of the form:

Chart 3. Monthly ratio of the prices of major foreign wheat exporting countries to U.S. prices, 1980–84



SOURCE: U.S. Department of Agriculture, Foreign Agriculture Service.

$$Y_t = \beta_0 + \beta_1 + \mu_t$$

was fitted, where Y_t is the dependent variable representing the ratio of foreign price to U.S price in month t; t is a particular month; β_0 and β_1 are regression parameters, with β_1 representing the trend in foreign prices relative to U.S. prices; and μ_t represents an error term. When the regression errors were tested for autoregressivity by the Durbin–Watson method, all four ratio series exhibited autoregressive behavior at significant levels. The error term μ_t was assumed to follow a first-order autoregressive process so that:

$$\mu_t = \epsilon_t - \alpha\mu_{t-1}$$

where α represents the autoregressive parameter; μ_{t-1} is a lagged error term; and ϵ_t is normally and independently distributed. In fitting the model, a second-order autoregressive process for the errors was also considered, but the estimated parameter of the second-order term was not significantly different from zero.

The results—summarized in table 3—provide evidence that Argentine and some Canadian prices declined relative to U.S. prices over the 1980–84 period. For Argentine wheat, the estimated trend coefficient shows that prices declined at a rate of 4.3 percent over the 5-year period. The trend coefficient is statistically significant at the 1-percent level. Canadian prices for hard red spring wheat at the port of Thunder Bay show a similar trend, falling at a 2.0-percent rate relative to U.S. prices over the same period. On the other hand, the trends for U.S. prices of white wheat and hard red spring wheat at the Pacific ports compared with prices for Australian standard (white) wheat and Canadian red spring wheat at Canadian Pacific ports indicate that Australian and Canadian prices remained well above comparable U.S. prices over the study period. Additionally, U.S. prices for hard red spring wheat at Gulf and Great Lakes ports, for the most part, remained below prices of the substitutable Canadian red spring wheat at Thunder Bay. In the case of the Australian and the latter two Canadian series, the trend appears small and imprecisely measured, and explains little of the variation over time in the relative price variables. The very low values of the coefficient of determination, R^2, for these sets of ratio data reveal a rather weak fit of the sample regression line.

Supply growth, strong dollar

There is evidence that the overall decline in world wheat prices can be partially attributed to a massive growth in supply in the world marketplace over the last several years that has outpaced the expansion of demand. Indirect evidence on this point can be drawn from a comparison of the ratio of production of the world's major exporters to their volume of exports. Over the 5-year period immediately preceding 1980, this ratio decreased from 2.17 to 1.81, a 17.0-percent reduction. The greater ratio of growth in exports than in production was associated with rising prices. Over the period 1980–84, however, the ratio increased from 1.81 to 1.92, or by 6.0 percent, indicating a rise in production relative to exports that has been associated with falling prices.

The strong appreciation of the U.S. dollar against the currencies of most of the major importers also helped to depress prices for wheat between marketing years 1979/80 and 1983/84. Wheat is traded on the international market in U.S. dollars. From July 1979 to December 1984, the

Table 3. Regression estimates of the trend in prices for selected categories of wheat exports, marketing years 1979/80—1983/84

Exporting country and port	Wheat class	Comparable U.S. wheat class[1]	Regression estimates			R^2	Standard deviation	Standard error of the regression
			Intercept	Trend	Autoregressive parameter			
Argentina: Bahía Blanca . . .	Hard winter (trigo pan)	No. 2 hard red winter	1.20 (50.61)	-7.3×10^{-4} (−9.42)	−0.267 (−2.99)	0.644	0.128	0.067
Australia: Western ports. . .	Standard white	No. 2 soft white (Pacific ports)	1.07 (36.24)	-3.6×10^{-5} (−0.44)	−0.720 (−8.03)	0.034	0.052	0.035
Canada: Thunder Bay. . . .	No. 1 western red spring 13.5 percent protein	No. 2 hard red spring 14 percent protein (Gulf, Duluth ports)	1.17 (24.82)	-3.3×10^{-4} (−2.47)	−0.725 (−8.17)	0.221	0.101	0.053
Vancouver	No. 1 western red spring 13.5 percent protein	No. 2 hard red spring 14 percent protein (Pacific ports)	1.08 (26.30)	4.5×10^{-5} (1.82)	−0.001 (0.01)	0.055	0.033	0.033
Thunder Bay. . . .	No. 1 western red spring 13.5 percent protein	No. 2 hard red winter	1.15 (18.40)	-1.9×10^{-4} (−1.11)	−0.919 (−7.15)	0.021	0.0973	0.050

[1]Weighted average of all U.S. ports, unless otherwise specified.

NOTE: t statistics in parentheses.

trade-weighted value of the dollar increased by 44 percent. (See chart 4.)

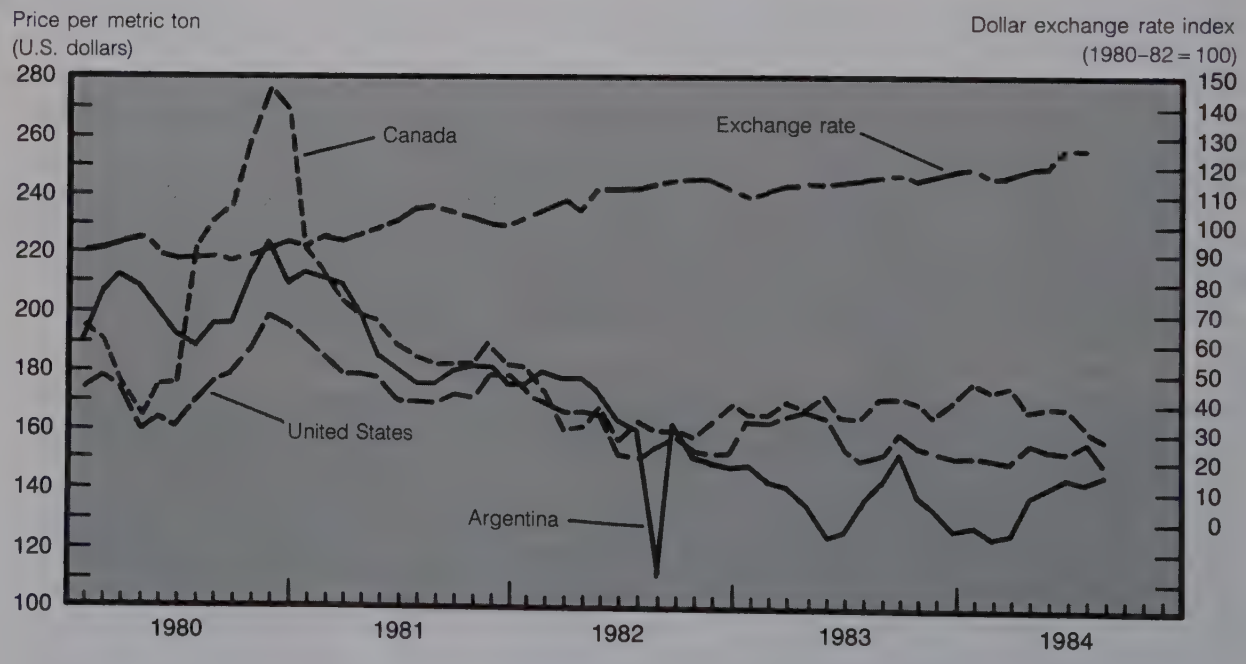
The effects of the strong U.S. dollar can be clearly identified on a market-specific basis. The real cost of wheat to the importer in terms of the local currency will depend on the relationship of the price movement of a given exporter's wheat and the performance of the importer's currency vis-à-vis the dollar. For example, China's yuan depreciated 71 percent against the dollar between March 1981 and December 1984. Over the same period, Argentina experienced a 42-percent decrease in its f.o.b. port price for hard wheat, Canada, a 22-percent decrease, and the United States, a 15-percent decline. These price drops, in combination with the yuan's depreciation, translated into price increases for Chinese buyers of hard wheat of 34 percent from Canada and 46 percent from the United States. Argentina's hard red winter wheat price showed no change.

While world prices for wheat generally trended downward between 1980 and 1984, individual exporters' prices at the port for a metric ton of wheat often varied rather widely at any given time. U.S. prices for hard winter wheat exceeded those of Argentina by almost $40 per metric ton in May 1983, and spreads of $20 to $30 per metric ton were not uncommon in 1983 and 1984. (See chart 3.) Australian prices were routinely above U.S. prices with the exception of the period from late 1981 through 1982 when severe weather conditions in Australia produced large quantities of poor quality white wheat which had to be sold at a discount. Canadian prices moved in concert with U.S. prices except in 1980 and 1981, when Canadian prices were much higher, and in 1984, during which Canadian prices (Thunder Bay) tended periodically to fall below U.S. prices for hard spring wheat. The United States has had difficulty in maintaining market share in part because of these trends in its prices relative to those of Argentina and Canada. However, U.S. agricultural policy and other nonprice factors have also played a role.

U.S. policy considerations

Because of its historical role as a world leader in international trade, the United States, through its agricultural policy, has greatly influenced world wheat supplies and, as a result, prices and market shares. The programs of the Commodity Credit Corporation (CCC), a Government-owned and operated organization charged with stabilizing, supporting, and protecting farm income and prices, serve as the instrument through which U.S. policy is implemented. The primary programs of the CCC affecting the U.S. share

Chart 4. Wheat export prices for Argentina, Canada, and the United States, and the monthly average exchange rate index for the U.S. dollar, 1980–84



SOURCE: U.S. Department of Agriculture and Morgan Guaranty Trust Co.

of the international market have been the CCC loan rate and the Farmer Owned Reserve (FOR). These two programs were developed to benefit domestic producers of wheat and other agricultural commodities but have also had a pervasive effect on the U.S. export situation.

Through the loan program, farmers are advanced a portion of the expected proceeds of their wheat crop, with part of the crop used as collateral. Congress determines the loan rate, stated in dollars per bushel, and varies it periodically to help achieve policy objectives such as supporting farm income. Wheat producers have the option of paying back the borrowed funds or forfeiting equivalent quantities of wheat. Farmers will theoretically exercise the latter option when the price of wheat is at or below the loan rate.

In recent years, the loan rate has continually increased even as the domestic market price has declined. Since the 1982/83 marketing year, the annual U.S. domestic price of wheat has been near or below the loan rate. For example, in 1983/84 the actual market price was $0.12 below the loan rate, or $3.53. As a result, wheat has been diverted from normal market channels into Governmental storage, creating increasingly large stocks of wheat as producers exercise their right of forfeiture to maximize profits.

Because it tends to improve a foreign producer's profitability on wheat production for export, the loan rate's recent increases—almost $2 since 1975—have coincided with increased production by major competitors, making available a greater volume of foreign wheat for export. (See chart 5.) In addition, although wheat is traded on the international market in U.S. dollars, all costs incurred in production are in local currencies. When costs remain stable and the value of the dollar rises, a foreign producer will receive a greater profit in local currency. As the loan rate and the exchange rate of the dollar increased simultaneously, foreign production has been encouraged.

The loan rate also resulted in U.S. wheat being offered at port at prices above those of competitors. The structure of the system technically prevented the price from going below the f.o.b. loan rate, which occasionally discouraged U.S. export sales to the international market. For example, during periods of peak export, Argentine f.o.b. prices have been below the U.S. f.o.b. loan rate price per metric ton, and periodically below the loan rate at farmgate,[13] since 1982/83. As a result, Argentina was able to export all available supplies at prices well below the floor on U.S. prices created by the U.S. loan rate. (See table 4.) For example, in March 1985, when prices for hard winter wheat from Argentina were $115 per metric ton[14] at the port, the loan rate price at farmgate per metric ton was $121—$6 above the Argentine price without taking handling and transportation costs to port into consideration. During marketing years 1982/83 and 1983/84, Argentina had no difficulty moving its increased production onto the international market. (See chart 5.)

A second CCC program, the Farmer Owned Reserve (FOR), literally pays farmers to hold stocks. The payment occurs when farmers hold wheat stocks for a period of 3 to 5 years, or until a predetermined release price is reached, and takes the form of a storage cost payment of $0.265 per bushel. In addition, the producer receives an initial loan from the Government at very attractive rates, which has encouraged heavy participation in the program.

Table 4. Argentine wheat export prices compared with U.S. Federal loan rates, selected months, 1983–84

[U.S. dollars per metric ton]

Year and month	Argentine f.o.b. price	U.S. loan rate	
		f.o.b. port[1]	Farmgate
1983:			
January	$148	$167	$130
February	143	167	130
March	141	167	130
April	135	167	130
1984:			
January	129	171	134
February	125	171	134
March	127	171	134
April	138	171	134

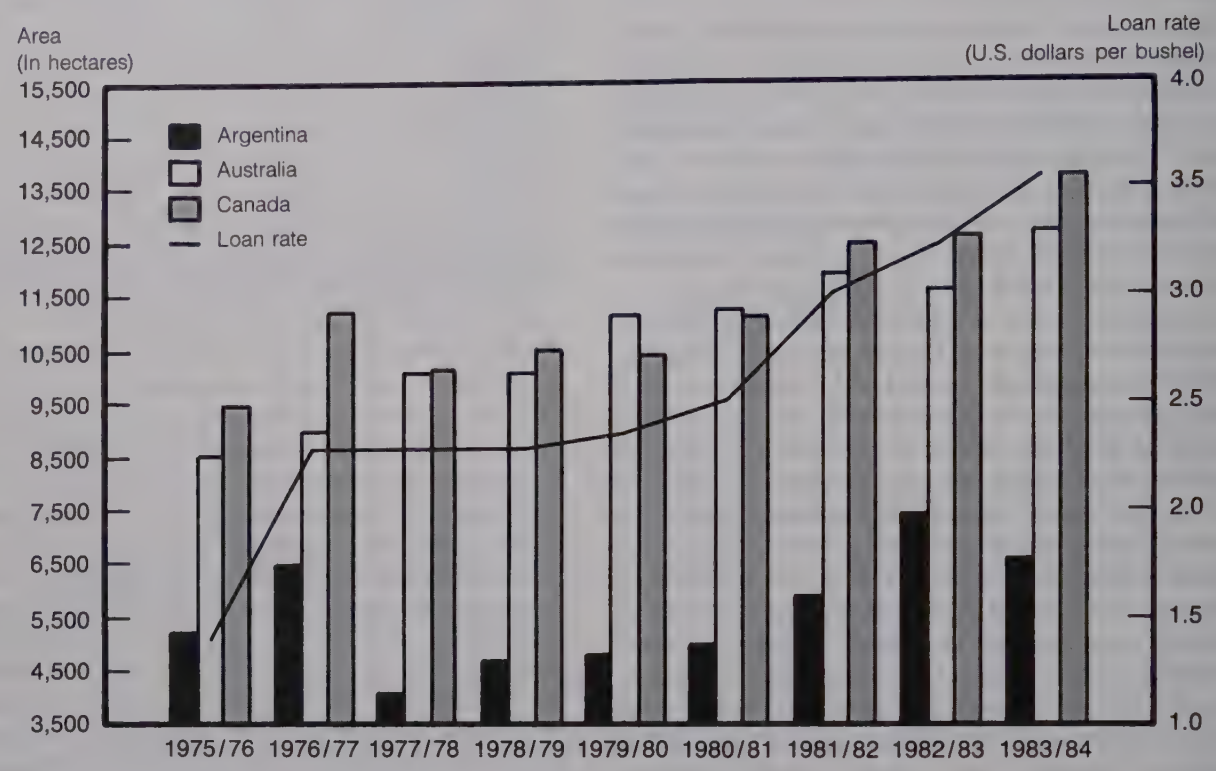
[1]Entries are f.a.s. (free-alongside-ship) estimates, including handling and transportation charges to port of $1 per bushel.

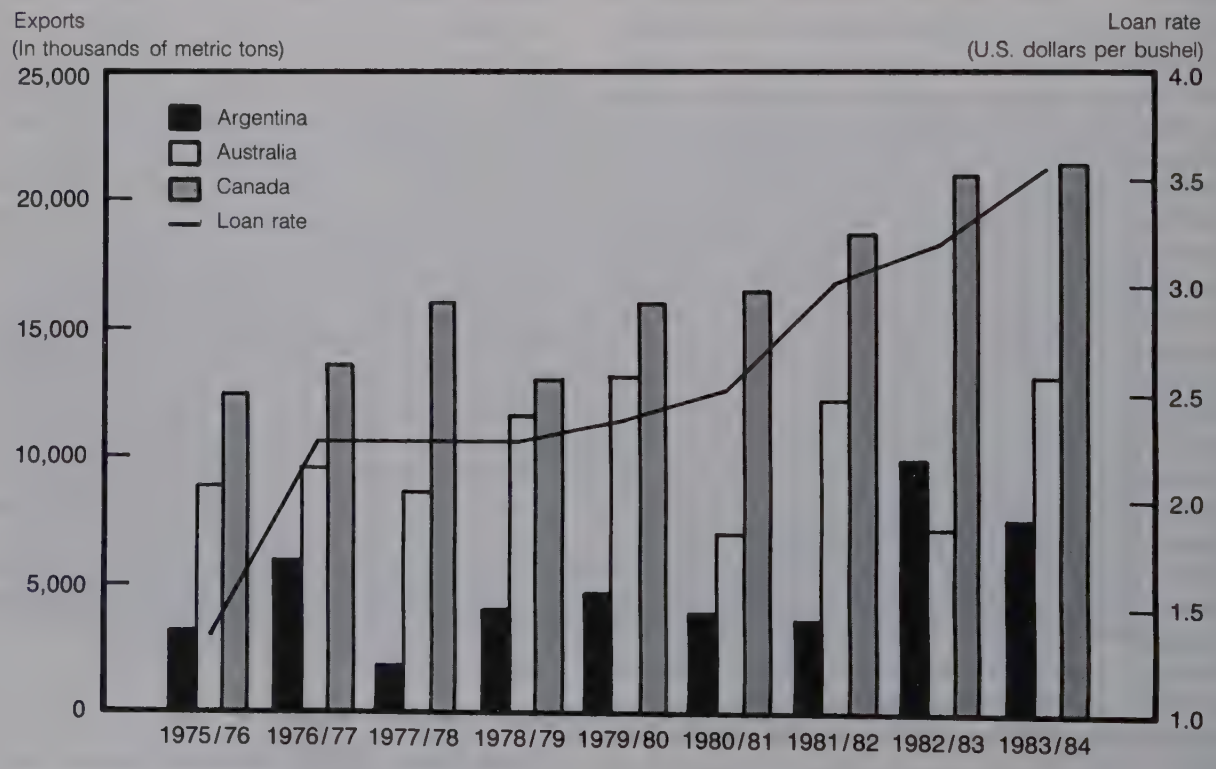
Two significant developments have resulted from the FOR program in recent years. Until the 1983/84 marketing year, the FOR loan rates were at a premium to the CCC loan rate, resulting in heavy FOR participation by wheat producers. During the 1982/83 marketing year, for instance, the FOR rate was $4 per bushel as opposed to the CCC rate of $3.55. In that year alone, the volume of FOR stocks rose by 500 million bushels to a total of 1.06 billion bushels, an all-time record. (See chart 6.) This development is especially troublesome for the United States, the only nation that stores significant amounts of its excess grain from year to year. As the result of record U.S. harvests of wheat in recent years, this system of reserve stockpiles is currently at extremely high levels. The FOR stocks, however, are not available for export because international prices for wheat have remained below the predetermined release price and the contract period of 3 to 5 years has remained in effect. As a consequence, U.S wheat supplies actually available for export have periodically been at uncharacteristically low levels. For example, in the 1982/83 marketing year, 70 percent of all ending stocks were committed to the FOR program and were thus unavailable for export. The additional 500 million bushels that entered the reserve in 1982–83 are trapped for at least 3 years unless the release price is reached, a situation that is not likely to occur. Such artificial shortages have tended to push up prices for remaining supplies, and U.S. exporters have periodically been forced to bid up prices to obtain the needed volume for export commitments.

Other nonprice effects

Price, while extremely important, is not the only factor in the decisions made by buyers of wheat on the world

Chart 5. Area devoted to wheat production and wheat exports by major foreign producers, against the U.S. loan rate, marketing years 1975/76 – 1983/84





SOURCE: U.S. Department of Agriculture, Foreign Agriculture Service.

market. Because of declining prices and the likelihood that supply will continue to grow faster than demand, countries faced with disposing of unsold wheat have reviewed export strategies developed in the seller's market of the 1970's, and have designed new approaches to meet these challenges. As an integral part of their new strategies to maintain and increase market share, the major exporters promote the superiority of their wheat over that of other countries, offer special credit arrangements, and establish trade agreements. These nonprice factors are reviewed here because their influence has probably been quite significant in the decision processes of importers over the last several years. They also help to explain why some countries have maintained or increased their share of the international market in the face of fierce competition.

With the exception of the European Community, all of the wheat exporting countries have attempted to secure a niche in the world market by establishing their particular product as superior or equal to comparable wheats produced by other countries. This practice is fairly new to some exporters but has become increasingly important in obtaining new customers and maintaining old ones. A country's grading system is the instrument through which it attempts to distinguish its wheat. Particular grades specify wheat of a quality that is best used for certain purposes; for example, top quality wheats are typically used to make bread. The common grading criteria include test weight (yield of flour), moisture content (dry matter), foreign material, hardness (milling properties), and color.

Although all countries' systems measure similar characteristics, they differ in how these measurements determine the actual quality and the adequacy of the system as an indicator of the end use value—how easily wheat is transformed into flour and the quality of the end product. In the United States, the grading system has evolved from merchandising practices, rather than by application of end use criteria. Wheat grades are used in the United States only as a descriptive device for bills of lading, certification for export, and similar purposes. Buyers usually purchase U.S. wheat on the basis of actual samples, with little regard to grade. Canada, Argentina, and Australia, however, have based their grading systems on end use value. These systems have been structured to facilitate the movement of wheat onto the export market. Canada, for example, has developed separate grade specifications for exports that are much more stringent than those for domestic grades, and has established the reputation of having the most reliable system and, therefore, wheat of a higher quality. Additionally, both Canada and Argentina clean their wheat prior to sale, thus upgrading the grain to command a premium price. Australia, also using end use value as its main criterion, has a flexible grading system which allows wheat of different lots and within certain protein and quality ranges to be mixed to the specifications of a particular buyer.

As grading systems have evolved, most major exporters have fine-tuned their systems in order to gain a competitive advantage on the world market. The United States has lagged behind other major exporters in this respect because of its reluctance to develop qualitative grade specifications that stress end use. In addition, other countries tend to cater to buyers' particular needs and desires through the design of their systems. These aspects of Canadian, Argentine, and Australian grading systems undoubtedly influence importers' purchase decisions. However, actual data on trade value gained or lost for this reason are unavailable.

Also entering into buyers' decisions are the several special credit arrangements offered to some extent by every major exporter. These credit arrangements primarily include credit lines, extended payment terms, credit insurance, loan guarantees, and favorable rates, and are provided separately or in combination depending on the trade relationship between the exporting and importing countries. Argentina and Australia, once offering little or no credit, both have developed programs within the last 2 years. Argentina's program entails loaning funds through the regular banking system. While the Australian government does not provide export credit financing for wheat, it does offer export credit insurance which guarantees a portion of the total payment.

Canada and the United States have used all of the previously mentioned forms of credit. However, the methods by which they are administered and their particular emphases have changed considerably over the years. The Canadian Government most often promotes direct financing and, to a lesser extent, guarantees, while the United States has tended to use credit guarantees in recent years. Of particular interest is the U.S. blended credit program, designed to aid middle-income developing nations in purchasing U.S. wheat. This program was instrumental in maintaining the U.S. market share in eligible countries while noncredit markets decreased by 30 percent between the 1981/82 and 1983/84 marketing years.[15] However, the program was discontinued in March 1985, and U.S. exports are projected to decline as a result.[16]

Another nonprice factor that has become important in the 1980's is the use of trade agreements. In an effort to ensure market share, major exporting countries have pursued these agreements aggressively. Importing countries, and especially the centrally planned and developing nations, often desire agreements to guarantee supplies year to year.

There are three principal types of agreements prevalent in the international wheat market: those for the current marketing year only (supply agreements), those covering a period of years (long-term agreements), and those giving preference to a particular country. Canada, Argentina, Australia, and the United States raised their agreement-related volume of trade by 1, 175, 14, and 16 percent, respectively, between 1979/80 and 1983/84.[17] The small increase in Canada's volume is misleading because over 50 percent of all

Canadian wheat exports were already under agreement at the start of the study period. Every major exporting county has an agreement with China, and all except Argentina and Australia have agreements with the Soviet Union for wheat. (However, Argentina does send a large proportion of its total wheat exports to the Soviet Union.)

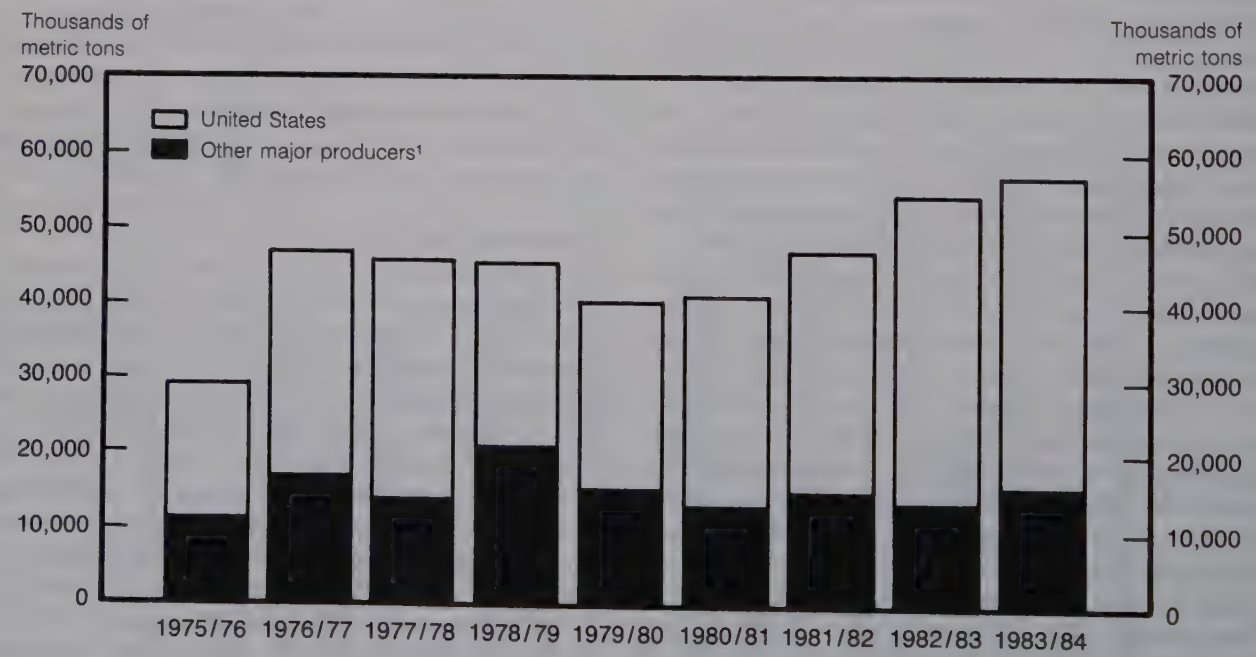
The United States has not engaged extensively in these agreements, having them only with China and the Soviet Union, while the other major exporters have numerous agreements. However, the United States does export comparable quantities under agreement, although not to the increasingly important secondary markets. The recent growth in trade activity between Argentina and Iran exemplifies the effectiveness of these agreements in securing markets. Prior to the signing of an agreement between Argentina and Iran in March 1983, Argentina exported no wheat to Iran, while the United States had exported approximately 700 thousand metric tons in 1981/82.[18] As a result of the agreement, Argentina exported 1.3 million metric tons of wheat, more than previous U.S. exports, to Iran in the 1983/84 marketing year, and the United States exported none.

Since the U.S. grain embargo of January 1980 to April 1981, the Soviet Union has come to rely heavily on long-term agreements in purchasing foreign wheat. The embargo encouraged the Soviet Union to diversify its sources of supply. As a result, the U.S. share of the Soviet market decreased from 36.5 percent in the 1979/80 marketing year to 20.7 percent in 1983/84. Other exporters, however, realized significant increases. Canada's share increased from 14.9 percent to 28.8 percent and Argentina's rose from 16.7 percent to 18.0 percent, but the EC saw the most dramatic increase—from only 5.6 percent to 20.3 percent—over the same period. The decline in U.S. market share represented a dollar value loss of an estimated $500 million in 1983/84.[19] With the exception of the increase in Argentina's share, most of the lost U.S. market was picked up by other countries under newly established long-term agreements. For instance, after the lifting of the embargo, Canada signed a 5-year agreement with the Soviet Union for 25 million metric tons of wheat and feed grains. This agreement will have increased the annual Soviet commitment to Canada for wheat purchases by more than 50 percent by marketing year

Such influences as trade agreements and credit arrangements work in concert with price in determining a buyer's source of wheat supplies. In addition, political considerations exert formidable influence in the decision process. However, these influences are difficult to examine in a rigorous manner.

WHILE THE APPROACH taken in this analysis is somewhat

Chart 6. Stockpiles of wheat in the United States and in other major producing countries combined, marketing years 1975/76 – 1983/84



[1] Includes Argentina, Australia, and Canada.

SOURCE: U.S. Department of Agriculture, Foreign Agriculture Service.

limited in scope, it does reveal several significant trends in U.S. prices for wheat relative to those of other major exporters. Argentine prices for wheat declined at a rate of approximately 4.3 percent relative to U.S. prices for comparable products over the 1980–84 period. This decline was pronounced in the last 2 years of the study period, during which Argentine prices averaged some 12 percent below U.S. prices. Prices for Canadian spring wheat (Thunder Bay) declined relative to prices for the U.S. spring wheat at a rate of 2.0 percent, with Canadian prices moving into proximity with U.S. prices in 1983 and 1984. The relative decline in foreign prices for wheat contributed to a 10-percent loss of U.S. market share between 1982 and 1984. Furthermore, even though price data were unavailable for the European Community, the EC's policy of subsidizing exports, along with its significant gains in market share in the last several years, are *prima facie* evidence that U.S. products are at a price disadvantage vis-à-vis Community exports. On the other hand, Australian prices for wheat did not decline significantly relative to U.S prices, and U.S. sales in terms of volume did not fall off in areas where these two countries compete. However, the decline in U.S. market share cannot be completely explained by price, as domestic agricultural policy and the emergence of aggressive new marketing strategies among foreign exporters also appear to have eroded the U.S. competitive position. □

———*FOOTNOTES*———

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[1] Wendy L. Wall, "U.S. Isn't Any Longer Cheapest Source of Some Kinds of Grain for Domestic Use," *The Wall Street Journal*, Jan. 14, 1985, p. 2, col. 3.

[2] The export price index for wheat (chart 1) includes the following classes of wheat: hard red winter, hard red spring, white, soft red winter, and durum.

[3] The Bureau of Labor Statistics' International Price Program is responsible for calculating import and export price indexes for the United States. These indexes are statistical measures of the average change in prices of products that are traded between the United States and the rest of the world. Export price indexes for wheat and other internationally traded products are Laspeyres indexes of the prices of products classified according to the Standard International Trade Classification (SITC). Price relatives are assigned equal importance within each weight category and are then aggregated to the SITC index level. Indexes are calculated for import categories in a similar manner:

$$I_{x,t} = \frac{\sum_j \sum_i \left[\frac{p_i^t}{p_i^0}\right] \frac{w_j}{n_j}}{\Sigma_j \Sigma_{wj}}$$

where

x	=	SITC group for which index is calculated;
j	=	the weight categories within group x (the Schedule B categories for exports, and TSUSA categories for imports);
i	=	product within category j;
n_j	=	number of price relatives within category j;
t	=	time;
w_y	=	share of value of the jth category in group x in the base year;
p_i^t/p_i^0	=	price relative of product i in year t to base year 0.

Price indexes for U.S. exports and imports are published quarterly in the BLS press release "U.S. Import and Export Price Indexes," available on request. For a comprehensive review of price trends in international trade in 1984 see Patricia Szarek and Brian Costello, "Prices of U.S. Imports and Exports Declined in 1984," *Monthly Labor Review*, April 1985, pp. 10–26.

[4] *From Wheat to Flour* (Washington, National Millers' Association, 1981), p. 1.

[5] For purposes of this article, the EC will be considered as a single nation. The European Community as of December 1984 included: Belgium, Luxembourg, Denmark, France, the Federal Republic of Germany, Greece, Ireland, Italy, Netherlands, and the United Kingdom.

[6] *Wheat*, Agriculture Information Bulletin No. 467 (U.S. Department of Agriculture, Economic Research Service, September 1984), p. 10.

[7] Estimates of trade value changes were calculated by multiplying the average price of all exports for all ports as of December 1984 ($153/metric ton) by the U.S. Department of Agriculture forcast volume of trade for the 1984/85 marketing year to arrive at the estimated value of total world trade in U.S. dollars ($16.126 billion). The changes in market share were then multiplied by the trade value to determine the gain or loss for a given exporter.

[8] Wheat is classified according to the growing seasons of the plant, color of the wheat kernel, and texture of the ripened grain. The texture of the grain is the most important criterion because it reflects the protein content of the wheat kernel. There are two basic textures of the wheat kernel, hard and soft. Hard wheats, which include durum, have the highest protein content and therefore can command a higher price because they are the best type of wheat for use in making bread. Soft wheats contain lesser amounts of protein and are best used for making cookies, crackers, and cakes. Both soft and hard wheat kernels may be either red or white in appearance with various shades of carotenoid and other pigmentation into yellows or amber. Finally, a particular type of wheat's growing season is typically designated in its classification. Some types of wheat, called "winter wheat," may be planted only in the fall and harvested in the spring. Other types of wheat must be planted in the spring and harvested in the fall and are called "spring wheat." Winter wheat will not yield a crop if planted in spring and spring wheat usually cannot survive the average winters of the Midwestern United States. These three characteristics are usually designated in the name of a particular class of wheat, as in "hard red winter wheat." If the growing season is not designated, the wheat class may be grown in either season.

[9] Foreign Agriculture Service regional designation. The Foreign Agriculture Service of the U.S. Department of Agriculture has established five regions of the world for purposes of collecting and reporting data. Asia/Oceania/Middle East encompasses the entire Asian continent including India and the islands of the southern and eastern Pacific including Japan. Other regions are: West Europe, East Europe, Africa, and the Western Hemisphere.

[10] *Export Markets for U.S. Grain and Products*, EMG-4-85 (U.S. Department of Agriculture, Foreign Agriculture Service, March 1985), p. 6.

[11] *Grain Outlook and Situation*, FG-1–85 (U.S. Department of Agriculture, Foreign Agriculture Service, January 1985), p. 4.

[12] The Argentine price includes an *ad valorem* tax on all exports of wheat.

[13] "F.o.b. port" loan rates are Foreign Agriculture Service f.a.s (free-alongside-ship) estimates, including handling and transportation charges to port of $1 per bushel. "Farmgate" represents the price at the farm excluding all transportation and handling costs.

[14] The Argentine price includes an 18-percent *ad valorem* tax.

[15] *Export Markets for U.S. Grain and Feed Commodities*, EMG-8–84 (U.S. Department of Agriculture, Foreign Agriculture Service, August 1984), p. 11.

[16] *World Grain Situation and Outlook*, FG–6–85 (U.S. Department of Agriculture, Foreign Agriculture Service), April 1985, p. 3.

[17] Many of the trade agreements also include coarse grains as well as wheat. Because the coarse grain amounts traded under agreement could not be separated from wheat amounts, the percentages presented here are estimates.

[18] The United States carried on trade in wheat from 1979/80 until Iran signed the grain agreement with Argentina in 1983. This span included the period of the U.S.–Iran hostage crisis.

[19] Lost dollar value for the United States was estimated by multiplying the average price for all major exporters for all ports for December 1983 ($155.67/metric ton) by 20 million metric tons, the volume of Soviet imports of wheat for 1983/84. Total dollar value for Soviet imports in 1983/84 was $3.11 billion. The change in market share was then multiplied by the trade value to determine U.S. loss of the Soviet market for 1983/84.

An early BLS study of women workers—by women

[BLS Commissioner Carroll D.] Wright's early and continuing concern about the impact of changing industrial developments on the family, and particularly on the employment of women and children, was reflected in a series of landmark studies. In 1888, the new Bureau [of Labor Statistics] issued *Working Women in Large Cities*, which covered 17,000 "shop girls" engaged in light manual or mechanical work in factories and stores, representing about 7 percent of such employment in 22 cities.

Notably, the survey was conducted in large measure by women agents of the Department, evidence also of the changing role of woman. Of these agents, Wright's report said, "The result of the work of the agents must bear testimony to the efficiency of the women employed by the Department, and to the fact that they are capable of taking up difficult and laborious work. They have stood on an equality in all respects with the male force of the Department, and have been compensated equally with them."

The study reported on the wages, expenditures, health, moral standards, work environment, family backgrounds, and marital status of the women. Commenting on the new opportunities and earnings of women, Wright observed, "A generation ago women were allowed to enter but few occupations. Now there are hundreds of vocations in which they can find employment. The present report names 343 industries in which they have been found actively engaged. . . . By the progress or change in industrial conditions, the limit to the employment of women has been removed or at least greatly extended, and their opportunities for earning wages correspondingly increased and the wages themselves greatly enhanced. . . . " He noted, however, that women were willing to work for lower wages than men.

—JOSEPH P. GOLDBERG AND WILLIAM T. MOYE
The First Hundred Years of the Bureau of Labor Statistics,
Bulletin 2235 (Bureau of Labor Statistics, 1985).

The 1982 Mexican peso devaluation and border area employment

Unemployment in U.S. border areas peaked in 1982 after the devaluation of the Mexico peso; increased manufacturing employment on the Mexican side adds to the number of Mexican consumers for U.S. purchases, creating more retail and service jobs on the U.S. side

LOUIS HARRELL AND DALE FISCHER

Regional economies are affected by business conditions in neighboring regions. Levels of disposable income and consumer preferences in external markets can influence which industries locate in a region, and economic circumstances in neighboring regions may affect local levels of personal income and employment. These conditions are illustrated by the recent economic trends along the U.S.-Mexican border. Increased manufacturing employment in Mexico expands the number of Mexican consumers able to purchase U.S. goods and services, which in turn creates conditions favorable for growth of retail and service jobs on the U.S. side.

In the U.S.-Mexico border region, a major influence on the local economies is the presence of two foreign countries at different stages of development. The 1,933-mile U.S.-Mexican border[1] is the world's longest political boundary separating a developing nation from a more fully developed industrial nation. The border regions have had to cope with two sets of national aspirations and development strategies which often affect existing economic relationships. Economic expansions and contractions are influenced not only by swings in the business cycle, but also by decisions made by either Government.

This article is an analysis of events—specifically the 1982 peso devaluations—that resulted in depressed economic activity in the U.S. southern border areas. The article looks at two concentrated and rapidly growing industries—manufacturing and retail trade—to determine why dependencies between U.S. border regions and their Mexican neighbors eventually led to regional economic crisis. It does not directly examine the national implications of border area development, such as shifts of manufacturing operations from other parts of the United States to Mexico.

Employment by industry from the Covered Employment and Wages Program of the Bureau of Labor Statistics[2] is used to analyze local area industrial concentration and growth between 1978 and 1980. Location quotients and shift-share components are computed and used to evaluate pre-devaluation economic conditions and trends. (See the appendix for details of these techniques.) The local areas studied are either counties or single-county Metropolitan Statistical Areas. Establishment survey data are used to review post-1982 developments.

The Mexican economy, 1978–82

On the Mexican side, the pace of economic development increased in 1978 when Mexico began to earn large revenues from oil exports. These modernization efforts required the importation of large amounts of capital goods and intermediate products financed largely by petroleum exports and foreign loans. However, in the early 1980's, international oil markets became oversupplied because of the drop in energy demand brought on by the world recession and price-

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induced conservation. Mexico experienced a sharp decline in export revenue, and the underlying conditions for the coming financial crisis were set.

When its ability to obtain foreign exchange weakened, Mexico was forced to increase its foreign debt simply to meet obligations from past financial arrangements. Pressure on the Mexican Government to encourage exports and discourage imports increased, and the peso was devalued in February 1982. The resulting decrease in Mexican demand for U.S. goods and services, in combination with the imposition of exchange controls, caused U.S. border employment to decline.

The *Maquiladora* Program

The Mexican *Maquiladora* Program, initiated in 1965 to stimulate the development of Mexican border areas, is a large source of foreign exchange and border area manufacturing employment. *Maquiladoras*, which are small, labor-intensive assembly plants, are an important source of income for many Mexicans. The increase in the disposable income of Mexican workers resulting from the program has also affected the industry mix on the U.S. side of the border.

The *Maquiladora* Program developed from a series of U.S.-Mexican agreements entered into after the end of the U.S. *Bracero* Program in 1965. (The *Bracero* Program regulated the flow of seasonal Mexican agricultural labor into the United States.) Another important predecessor of the *Maquiladora* Program was the National Border Program, which provided jobs developing infrastructure—such as roads and railroad sidings—needed to attract both domestic and foreign investors.[3] Using the facilities built by the National Border Program, the *Maquiladora* Program encouraged U.S. firms and Mexican entrepreneurs to build manufacturing plants in Mexico and to produce goods for the U.S. market. *Maquiladora* firms are allowed to import intermediate products and raw materials into Mexico without tariff charges. The only tax or duty incurred by these firms is charged when the products re-enter the United States. A value added tax is applied to that part of the product produced in Mexico.[4]

Impact of *maquiladoras* on U.S. manufacturing

Because of their dependence on the U.S. market, most *maquiladora* plants are located within 20 kilometers of the U.S. border, primarily in densely populated areas with highly developed infrastructures. In general, twin Mexican and U.S. plants exist, each responsible for different parts of the production process. The Mexican operations, which on average have a production work force of 75 to 80 percent women between 19 and 23 years old, perform the less skilled, more labor-intensive tasks, while the U.S. plants perform more capital-intensive jobs requiring higher skill levels. The main border areas where *maquiladora* plants are located are Tijuana-San Diego, Nogales-Nogales, Ciudad Juarez-El Paso, and Matamoros-Brownsville.[5] *Maquiladora* operations primarily produce apparel, leather, furniture, food and drink, machinery, electronics, transportation equipment, and chemical products.[6]

The popularity of this program with U.S. businesses is attributable to the cost advantage of using less expensive Mexican labor. Mexico's proximity to the U.S. market makes its wage structure competitive with the low wage levels found in Hong Kong, Taiwan, and South Korea. For example, at the October 1983 exchange rate, an average compensation of 90 cents per hour was paid to workers in *maquiladora* firms. This average includes benefits required by Mexico's Federal Labor Law such as social security contributions, education taxes, maternity leave, employee housing, day care assistance, and state payroll taxes.[7]

The effect of increased *maquiladora* activity on manufacturing employment on the U.S. side of the border is illustrated by the location quotients in table 1. A location quotient greater than 1 indicates that an industry accounts for a higher proportion of total employment in the county than in the State. Hence, the higher the location quotient, the more concentrated the industry is in the county relative to the State. Certain types of manufacturing industries are more attracted than others to U.S. border counties. Industries with the highest location quotients in U.S. border counties are apparel and food products manufacturing. These same industries are also known to be well suited to *maquiladora* operations in Mexico.

Apparel manufacturing is highly concentrated in Santa Cruz (AZ), El Paso (TX), Cameron (Brownsville, TX), and Hidalgo (McAllen, TX) Counties. In El Paso County, the ratio of apparel manufacturing to total employment is eight times that of the State for this industry. Clearly, apparel manufacturing is a dominant industry there. In the other counties, the respective location quotients for apparel manufacturing are also significant—ranging from 3 to 6.

To determine why certain industries are so dominant in U.S. border areas, shift-share components are shown in table 1. The actual industry employment change observed

Table 1. Location quotients[1] and shift-share components[2] for selected border counties and manufacturing industries

County	Industry	Employment change				Location quotient
		Actual	Effect of shift-share by			
			State-wide	Industry mix	County share	
Santa Cruz (Arizona):	Apparel	7	28	−48	28	5.9
San Diego:	Electrical	6,885	1,138	1,027	4,716	1.0
	Transport	4,465	2,019	39	2,406	1.6
Cameron (Brownsville):	Apparel	276	297	−307	285	3.7
El Paso:	Apparel	2,225	1,638	−1690	2,277	8.4
Hidalgo (McAllen):	Food	586	267	−244	563	7.3
	Apparel	874	251	−260	882	3.2

[1]Location quotients indicate the extent of industrial specialization present in a region at a point in time and are computed from 1980 annual averages.

[2]Shift-share components isolate explanatory growth factors and are computed using 1978 as the base period and 1980 as the end period.

is a function of three factors: the statewide effect (normal growth); the industry mix effect (growth because of a preponderance of dynamic industries in the local area); and the county share effect (growth for reasons that are specific to the local area).

In the four border counties with significant proportions of employment in apparel manufacturing, the industry mix effect is negative while the county share effect is positive and large relative to the total change in the industry's employment. This may indicate a general shift in the industry's locational preference from other parts of the State to the border region, apparently for county-specific reasons.

Other border counties show similar trends. In San Diego County, CA, the manufacture of electrical components and transportation equipment provides employment to a significant share of the county's labor force. These industries are also significant in other locations in the State as evidenced by a location quotient close to 1. The positive industry mix effect indicates that these industries have growth rates exceeding the State average for all industries. San Diego County, however, has a rate of growth in these industries far above the State growth rate. This may imply that, for county-specific reasons, San Diego is attracting a larger share of the State's electrical component and transportation equipment manufacturing activity.

The rapid growth in manufacturing employment in U.S. border counties over the study period is partly because of the success of *maquiladora* industries in neighboring Mexican communities and the emerging twin-plant concept. Of the 594 *maquiladora* assembly plants employing more than 156,000 workers by November 1983, 94 percent of the plants were located in the 20-kilometer zone adjacent to the U.S. border.[8] This is strong evidence that increasing economic relationships and interdependencies are developing between manufacturers in the United States and Mexico.

Retail trade

Historically, a symbiotic relationship has existed between U.S. and Mexican citizens living along the border. According to the 1980 census, 8.7 million U.S. citizens are of Mexican ancestry.[9] Many of them live in the border communities of the Southwest. The extensive social networks existing between Mexican nationals and U.S. citizens of Mexican origin have reduced political and physical barriers to commerce. Differences in language and custom have not deterred Mexican nationals from patronizing U.S. merchants.

In fact, U.S. retailers located along the border increasingly depend on peso customers. During the U.S. recessionary period of 1980 and 1981, Mexican purchases of U.S. goods and services helped insulate border area retail trade from the domestic downturn. Some economists estimate that prior to the 1982 devaluations, 60 percent of goods consumed in Mexican border towns came from the United States.[10]

Given barriers such as lack of familiarity with shopping facilities and higher travel costs, why is it that large numbers of Mexicans, wealthy and poor, have entered this country to purchase goods and services, many of which are also available in Mexico? Several consumer surveys of Mexican outshoppers (Mexican citizens who frequently shop in the United States) were conducted prior to 1982. Survey findings indicate that Mexican consumers generally believe that U.S. merchants have a greater selection of higher quality merchandise and offer better service. Respondents also indicated that shopping trips to the United States were frequently combined with social events and family activities. Also, the surveys showed that the pre-1982 purchasing power of the peso in the U.S. marketplace was an important reason Mexican nationals chose to shop in the United States.

The peso's buying power relative to the dollar is a function of the peso-dollar exchange rate and the differential in the two domestic rates of inflation. For example, if inflation in Mexico is higher than in the United States over time and the peso-dollar exchange rate is held constant, the peso price of similar goods and services will be lower in the United States.

From 1978 to 1982, Mexico experienced higher rates of inflation than did the United States, while concurrently maintaining a fixed exchange rate. Hence, the peso enjoyed a period of enhanced buying power in the U.S. market. Mexicans crossed the border in increasing numbers to trade with local U.S. retailers. To encourage their Mexican customers, U.S. merchants stepped up advertising campaigns in local Mexican newspapers and on the radio. Moreover, U.S. retailers began to accept pesos rather than requiring payment in dollars.[11]

Impact of Mexican demand on U.S. trade

During 1978–80, U.S. border counties showed significant employment concentrations in general merchandising and apparel retailing and rapid employment growth in retail and nondurable wholesale industries. In Santa Cruz County, AZ, for example, these industries were four times as concentrated in the county than in the State as a whole (location quotients of 4.0). (See table 2.)

Apparel retailing showed a strong concentration in Webb County, TX (with a location quotient of 4.1). General merchandise retailing also had significant concentration with a ratio of 2.7. The city of Laredo, located in Webb County, was the recipient of $1.5 billion spent by Mexican nationals in 1981 and had the third highest retail sales per resident of any city in the United States that year ($22,000 per person).[12]

Border area employment in the retail and wholesale sectors grew rapidly over the study period. The significant county-share effect values in table 2 indicate that county-specific factors have strongly influenced trade industry growth in some of the border counties.

In Santa Cruz County, county-specific factors explain 47

Table 2. Location quotients[1] and shift-share components[2] for selected border counties and trade industries

County	Industry	Employment change				Location quotient
		Actual	Effect of shift-share by			
			Statewide	Industry mix	County share	
Santa Cruz (Arizona):	General merchandise	187	89	9	88	4.4
	Food	42	35	17	−11	1.4
	Apparel	66	23	15	27	4.0
	Eat/drink	46	39	7	1	0.8
	Wholesale (nondurable)	94	67	−82	108	4.8
San Diego:	Eat/drink	3,989	3,048	757	182	1.1
Cameron (Brownsville):	General merchandise	280	253	−125	152	1.6
	Food	335	209	87	38	1.2
	Eat/drink	363	268	94	1	0.9
	Wholesale (durable)	326	243	102	−20	0.9
El Paso:	General merchandise	225	580	−286	−69	1.4
	Eat/drink	308	869	305	−867	1.0
	Wholesale (durable)	1,043	553	233	256	0.8
Hidalgo (McAllen):	General merchandise	402	251	−124	274	1.4
	Food	710	225	93	397	1.2
	Eat/drink	493	246	86	159	0.7
	Wholesale (nondurable)	523	379	−140	283	1.9
	Wholesale (durable)	453	208	88	156	0.7
Webb (Laredo):	General merchandise	211	219	−108	100	2.7
	Food	121	119	49	−47	1.3
	Apparel	470	141	21	307	4.1
	Eat/drink	370	120	42	207	0.9
	Wholesale (nondurable)	125	92	−34	66	1.1

[1]Location quotients indicate the extent of industrial specialization present in a region at a point in time and are computed from 1980 annual averages.

[2]Shift-share components isolate explanatory growth factors and are computed using 1978 as the base period and 1980 as the end period.

percent of the increase in employment in general merchandise retailing and also account for 41 percent of the net employment change in apparel retailing. In the nondurable wholesale industry, the county effect offsets a large negative industry mix effect. This may indicate that most of the industry's statewide growth has been concentrated in the border area.

Similar results were derived for other border counties. Particularly in Hidalgo County (McAllen, TX), where significant Mexican outshopper activity occurs, the county-share effect strongly influenced employment increases in general merchandising, food retailing, eating and drinking places, and wholesale outlets. The data suggest that the influx of Mexican consumers into the United States, caused by the increasing disposable income of Mexican workers and superior buying power of the peso in the United States, stimulated the expansion of retail and wholesale businesses on the U.S. side of the border.

Other research supports the existence of an emerging dependency between the Mexican and U.S. border economies.[13] Testimony at recent hearings of the House Committee on Government Operations cited the importance of the *Maquiladora* Program for the entire region. Data from the U.S. Department of Commerce were presented showing that borderland Mexican families made 40 to 75 percent of their expenditures in the United States, purchasing more than $4.8 billion of goods and services from border region businesses in 1981.[14]

Mexican devaluations

Inflation in Mexico has historically been higher than that experienced in the United States. This, in addition to the Mexican Government's policy of supporting the peso to maintain long-term exchange-rate stability, has resulted in extended periods when the peso was overvalued in terms of the U.S. dollar. Consequently, Mexican exports, and the employment and income generated from their production, were probably lower than they would have been had more regular exchange-rate adjustments occurred. Conversely, Mexican imports have been less expensive, increasing demand for foreign-made products. Large periodic devaluations have brought the value of the peso back into line with the dollar, while the corresponding drop in the peso's buying power has shocked economies on both sides of the border.

In 1976, 22 years after the previous adjustment, the peso was devalued 45 percent in terms of the dollar. The unexpected magnitude of the 1976 devaluation caused immediate and severe shocks to border economies. Goods and services in the United States became prohibitively expensive for Mexican consumers. Mexican outshopper activity was drastically reduced. Some United States counties along the border were hit so severely that they qualified for Federal

economic disaster aid.[15]

The border areas remained depressed until the financial incentive returned for Mexican consumers to shop in the United States. This occurred because Mexico's annual average inflation rate of 30 percent remained higher than inflation in the United States, and the Mexican Government again supported a stable peso-dollar exchange rate. The value of the peso gradually increased in relation to the dollar, making U.S. goods and services relatively attractive again to Mexican consumers. The cycle of an overvalued peso, Government support to stabilize the currency, and eventual devaluation was again played out in February 1982 when the peso was devalued by 30 percent. The equivalent peso price of goods and services in the United States increased by 70 percent, causing a painful shock to border economies. For example, in February 1982, all but two areas along the Texas border lost retail sales in comparison with the previous year.

Although the February 1982 peso devaluation was substantial, it was insufficient to resolve Mexico's trade imbalance and did not allow Mexico to obtain enough foreign exchange to meet its obligations to creditors. Hence, 6 months later, while local economies were still reeling from the February devaluation, the peso was further devalued by 75 percent.[16] In addition, exchange controls were imposed. Dollar accounts in Mexican banks, amounting to about $14 billion, could only be withdrawn in pesos at a devalued rate of 69.5 pesos to the dollar. Customers buying pesos with dollars were also charged this rate, while limited amounts of dollars for specific government-sanctioned purposes could be purchased at 49.5 pesos to the dollar. All other foreign exchange demands, including those of Mexicans wanting to shop in the United States, were subject to the higher market-determined rate. Five days after implementation of the new exchange rules the market-determined exchange rate was 90 pesos to the dollar.

Impact of devaluations on U.S. border economies

Retail businesses in U.S. border towns suffered from the effects of the February and August 1982 peso devaluations. The damage was greatest in small towns where much of the employment is concentrated in retail trade. To a lesser extent, large cities with more diversified industrial mixes were affected.

Wholesale and retail trade employment showed immediate and sharp declines in the months following the devaluation. Trade employment in Brownsville, TX, in September 1982, was almost 6.5 percent below the level of a year earlier. In comparison, employment from September 1980 to 1981 in Brownsville showed a 10.7-percent increase. Other small, border cities such as Laredo and McAllen, TX, showed similar over-the-year downward trends. San Diego, being larger and more economically diverse, did not experience the same drastic effects as Brownsville, Laredo, or McAllen.[17]

Employment trends experienced by these two distinct types of border area economies differ. San Diego's employment has shown slow, steady growth during the past 4 years. Unemployment has moved in the same direction as the national business cycle, climbing in the summer of 1981 and peaking in late 1982. Laredo had a larger percentage increase in employment than did San Diego until the devaluation in February 1982. After the devaluation, Laredo's employment dropped sharply. The unemployment rate shot up rapidly and by early 1983 was more than two and a half times its January 1980 level.

Research published by the Dallas Federal Reserve Bank quantifies the relationship between industrial diversification and exchange-rate shocks for selected Texas border cities. Of the four cities studied (El Paso, Laredo, McAllen, and Brownsville), Laredo was most closely tied to the Mexican economy. Laredo, which has a large retail sector, also suffered the worst unemployment rate of any border city during 1982 and 1983. In comparison, El Paso, a city with a large manufacturing sector, was better able to withstand fluctuations in Mexican demand for U.S. goods and services. Its unemployment rate peaked at about 14 percent in 1983 compared with Laredo's 28 percent.[18]

The impact of exchange-rate adjustments on border county unemployment for San Diego, El Paso, Webb, Cameron, and Hidalgo Counties varies. Webb County, where the city of Laredo is located, was the most sensitive to peso devaluations, San Diego, the least. Webb County has a high concentration of retail and a relatively low concentration of manufacturing industries. The September 1982 unemployment rate for Webb County was 21.7 percent. In contrast, San Diego County has a more diversified industry mix. The unemployment rate there in September 1982 was 9.8 percent. Accordingly, correlation coefficients for county unemployment rates and the peso-dollar exchange rate are generally higher for counties which rely more on retail establishments for employment and less on manufacturing. The correlation coefficient for Webb is .82; Hidalgo, .80; and Cameron, .72. Conversely, San Diego and El Paso have correlation coefficients of .31 and .48.

Impact of devaluations on the Mexican side

After the 1982 devaluations, merchants in Mexican border towns experienced an influx of bargain-hunting U.S. citizens entering Mexico to take advantage of the dollar's newly enhanced buying power. Gasoline sold there for the equivalent price of 33 cents per gallon.[19] Basic food items, such as sugar and flour whose prices were supported by the Mexican Government, were being bought up by U.S. citizens. Store inventories were rapidly being depleted, forcing the Mexican Government in August 1982 to restrict the transport of certain commodities into the United States.[20]

In spite of the devaluations, Mexican inflation continued to exceed inflation rates in the United States. Inflation in

Mexico was more than 100 percent per year by September 1982.[21] While Mexico stabilized the peso-dollar exchange rate at 70 to 1 for most purposes, including most dollar purchases of pesos, the peso's value for all other uses was allowed to float and consequently continued to fall in dollar terms. Peso purchases of dollars were based on the much higher floating rate.

The differential in exchange rates in the two countries had two important results. First, U.S. nationals traveling to Mexico exchanged their dollars for pesos in the States.[22] In so doing, they received 15 to 30 more pesos to the dollar than they would have had they waited until they were in Mexico. Second, U.S. retailers, in an attempt to regain their Mexican customers, offered discounts and extended payment schedules to peso customers. They also accepted pesos at an above-market rate, absorbing the exchange loss themselves when they deposited the pesos in their local banks.[23] Consequently, Mexico was capturing almost no dollars, while U.S. banks were being flooded with unwanted pesos. U.S. banks reacted by refusing to accept additional pesos.[24]

Mexico's inability to obtain sufficient dollars and the lack of peso-dollar convertibility made it very difficult for Mexican manufacturers to import components and raw materials from the United States. They either had to find domestic suppliers, who were likely to be located farther away than U.S. suppliers, increasing transportation costs and making delivery dates less predictable, or stop operations.[25] Because many of the U.S. suppliers were located along the border, employment in the region suffered.

The downturn in manufacturing employment is most vividly seen in El Paso. Using year-ago comparisons for September and October of 1981 and 1982, large percentage-increases in employment occurred in September (19.8 percent) and October (15.0 percent) of 1981 while over-the-year declines occurred for the same months in 1982 (-19.3 percent and -15.6 percent).[26] The resulting downturn in manufacturing on both sides of the border, coupled with the reduction in Mexican outshopper activity, led to a sharp increase in unemployment along the U.S. border.

At the official rate of 70 pesos to the dollar, Mexico was capturing only 12 percent of its dollar requirements by September 1982. Rapidly growing inflation was also a continuing problem, particularly in Mexican border communities. Faced with an intolerable situation, the Mexican Government revised its exchange rules in November 1982, allowing border area merchants and money changers to exchange pesos for dollars at rates similar to market-determined rates existing in the United States. A two-tiered exchange structure emerged in Mexico, with the Mexican border areas adopting a semiflexible rate, while the fixed 70 to 1 rate was adhered to in the Mexican interior. The new rules did result in additional dollars coming into Mexico. This allowed Mexican manufacturers to again purchase U.S. source components and raw materials, and allowed local merchants and consumers to acquire U.S. products.[27]

The current situation

Several recent events should have an impact on the border area economy. In August 1984, the Mexican Government and its 550 foreign creditors concluded a rescheduling of payments on Mexico's public sector debt. This agreement averted the prospect of Mexico repaying $10 billion in loans next year with the remainder of its $48.7 billion debt falling due during 1985–90. The rescheduling will spread repayments through 1998. Other bank concessions on fees and interest rates will save Mexico $5.5 billion. The rescheduling is contingent upon Mexico continuing to maintain policies of economic austerity.[28]

Clearly, any improvement in Mexican economic conditions will have a positive effect on U.S. border area employment. Gains in employment in Mexican border areas should allow Mexican consumers to purchase U.S. goods and services and increase demand for inputs into *maquiladora* manufacturing.

As of December 1984, the five counties profiled in this article had all started to show signs of recovery from their devaluation-induced economic problems. Four of the five areas showed increases in total nonagricultural employment and declines in unemployment from December 1983. The over-the-year change in unemployment for Laredo, TX, was the largest decline among all U.S. metropolitan areas. However, Laredo still had the Nation's second highest area unemployment rate in December 1984. McAllen had the Nation's highest unemployment rate in December and was the only border area to show an over-the-year increase in unemployment and a decline in employment.[29]

In addition to the debt restructuring and growth in employment, other factors have the potential to affect the border area. The value of the peso has not yet stabilized. Continuing shifts in the world price of oil make any attempt to establish a firm price for the peso very difficult. Severe winter weather during the past 2 years has had an adverse impact on agriculture on both sides of the border. Weather-related damage to the area's citrus groves may also disturb local tourism and trade. As indicated earlier, *Maquiladora* Program employment is related to the growth of U.S. manufacturing, particularly the apparel industry. The current strength of international competition in the industry could make growth difficult.

The turbulent events of 1976 and 1982 have demonstrated the importance of interregional dependencies on border communities. Although these relationships can be beneficial to both sides, they may also increase regional vulnerability to exchange-rate fluctuations. The evidence presented here suggests that more diversification in regional industry mix in border regions tends to moderate negative aspects inherent in their geographic location. Lessons learned from the 1982 peso devaluations should be of great value to those involved in formulating economic development strategies for border areas in the future. □

——FOOTNOTES——

[1] *The World Almanac*, 1984 ed. (New York, Newspaper Enterprise Association, Inc.), p. 435.

[2] A cooperative endeavor of the Bureau of Labor Statistics and State employment security agencies, the Covered Employment and Wages Program is a comprehensive and accurate source of employment and wage information reported by industry at the national, State, and county level. Data coverage includes employment and wages for workers covered by State unemployment insurance laws and for civilian workers covered by unemployment for Federal employees.

To facilitate the analysis, employment data were reduced to manageable levels first by selecting only those counties with potentially significant cross-border economic activity (determined by the presence of neighboring towns or cities on opposite sides of the border with relatively large populations) and second by deleting from the data base all industries with less than 3 percent of total county level average monthly employment for 1980. The remaining industries and counties, because of their relative importance to regional economic well-being, were retained.

For a fuller explanation of the Covered Employment and Wages Program see the *BLS Handbook of Methods*, Vol. 1, Ch. 5, "Employment and Wages Covered by Unemployment Insurance."

[3] Anna-Stina Ericson, "An analysis of Mexico's border industrialization program," *Monthly Labor Review*, May 1970, pp. 33–40.

[4] Roger Turner, "Mexico Turns to its In-Bond Industry as a means of Generating Exchange" reprint from *Business America*, Nov. 28, 1983 (U.S. Department of Commerce, International Trade Administration), p. 2.

[5] Turner, "Mexico Turns to its In-Bond Industry," p. 2.

[6] Luis Suarez Villa, "La Utilizacion de factores en la industria Maquiladora de Mexico," *Comercio Exterior*, October 1982, p. 1132.

[7] Turner, "Mexico Turns to its In-Bond Industry," p. 2.

[8] Ibid.

[9] See Table 75, "Persons by Spanish Origin, Race, and Sex: 1980," *General Social and Economic Characteristics of the 1980 Census of Population, PC 80-1-C1, U.S. Summary* (U.S. Bureau of the Census, December 1983).

[10] Linda Chavez, "Mexico Curbs: Border Suffers," *The New York Times*, Sept. 25, 1982, p. 39.

[11] "In El Paso Stores, a Nervous Quiet," *The New York Times*, Sept. 25, 1982, p. 41.

[12] "Down and Out in Laredo," *Fortune Magazine*, Nov. 1, 1982, p. 139.

[13] Harry W. Ayer and Ross M. Layton, "The Border Industry Program and the Impacts of Expenditures by Mexican Border Industry Employees on a U.S. Border Community: An Empirical Study of Nogales," *Annals of Regional Science*, June 1974.

[14] *The Federal Response to the Impact of Mexican Peso Devaluations on U.S. Border Business* (U.S. House of Representatives, Committee on Government Operations, 22d Report, 98th Cong., 1st sess.), Nov. 19, 1983, p. 21.

[15] Steve Frazier, "U.S. Towns Near the Border with Mexico Feel the Slump From Peso's Devaluation," *The Wall Street Journal*, Mar. 1, 1982, p. 25.

[16] Wayne King, "Peso's Turmoil Shakes Economies of Cities on Mexican-U.S. Border," *The Wall Street Journal*, Aug. 22, 1982, p. 1.

[17] These data are based on a monthly survey of establishment payroll records conducted by the Bureau of Labor Statistics, in cooperation with State agencies. The survey is designed to provide industry information on nonagricultural wage and salary employment, average weekly hours, average hourly earnings, and average weekly earnings for the Nation, States, and metropolitan areas. The data are derived from a sample of more than 200,000 establishments employing more than 35 million nonagricultural wage and salary workers and relate to all workers full- or part-time who received pay during the payroll period which includes the 12th day of the month.

[18] Alberto E. Davila, Ronald H. Schmidt, Gary M. Ziegler, "Industrial Diversification, Exchange Rate Shocks, and the Texas-Mexico Border," *Economic Review* (Federal Reserve Bank of Dallas, May 1984), p. 6.

[19] King, "Peso's Turmoil," p. 1.

[20] William E. Schmidt, "Southwest is Cashing in on the Peso from Wealthy Visitors from Mexico," *The New York Times*, Feb. 10, 1982, p. 14.

[21] *International Financial Statistics*, International Monetary Fund, May 1984.

[22] "In El Paso Stores," *The New York Times*, p. 41.

[23] Chavez, "Mexico Curbs," p. 39.

[24] Robert Reinhold, "New Rules on Peso Lure Some Dollars," *The New York Times*, Nov. 26, 1982, p. D5.

[25] Chavez, "Mexico Curbs," p. 3.

[26] Establishment Survey data (see footnote 17).

[27] Reinhold, "New Rules on Peso," p. D5.

[28] "Tequila with Salt," *The Economist*, Sept. 15, 1984, p. 85–86.

[29] Bureau of Labor Statistics, "State and Metropolitan Area Employment and Unemployment: December 1984," Press Release, Feb. 12, 1985.

APPENDIX: Analytical techniques and limitations

Location quotients indicate the extent of industrial specialization present in a region at a point in time. In this study, the ratio of industry to total employment in the county is compared to the ratio of industry to total employment in the State. Location quotients (LQ) can be expressed as

$$\frac{Eic/Ec}{Eis/Es} = LQ$$

where: Eic = Industry employment in county
Ec = Total employment in county
Eis = Industry employment in State
Es = Total employment in State

Values greater than 1 indicate relatively higher concentrations of the industry's employment, and, therefore, proportionally more of the industry's activity, in the county compared with the State.

Shift-share components attempt to isolate explanatory growth factors. Theoretically, industry employment changes can be separated into three categories: the statewide, industry mix, and county share effects. The statewide effect reflects the impact of growth in State total employment upon the industry's employment in the county. Algebraically, the statewide growth effect, *N*, is

$$N = [Eic(t-1) \times Es\ (t)/Es(t-1)] - Eic(t-1)$$

where: Eic = Industry employment in county
Ec = Total employment in county
Eis = Industry employment in State
Es = Total employment in State
t = End period
t − 1 = Base period

The industry mix effect measures the impact on county level industry employment resulting from the distribution of the

county's total employment among higher and lower growth industries. Using the previous notation, industry mix, M, is:

$$M = [Eic\ (t-1) \times (Eis\ (t)/Eis(t-1) - Es(t)/Es(t-1))] - Eic(t-1)$$

The county share effect measures that part of local employment growth resulting from unique competitive advantages present in the local area for that industry. This last component is important because it partly measures the influence of Mexican consumers and manufacturers on U.S. border areas. Using the same notation as before, the county share effect, S, is:

$$S = [Eic\ (t-1) \times (Eic(t)/Eic(t-1) - Eis(t)/Eis(t-1))] - Eic(t-1)$$

The sum of these three factors represents the actual growth, R, of the industry in the county where:

$$R = N + M + S \text{ and}$$
$$R = Eic(t) - Eic(t-1)$$

Viewed together these growth factors can illuminate, at least in general terms, the reasons for an industry's local area performance.

Using changes in employment as a proxy for changes in industrial activity introduces problems of which the reader should be aware. Employment growth, for example, may systematically understate economic activity when the industry is experiencing rapid labor productivity gains. Furthermore, under-employment and part-time employment are not explicitly accounted for in equations for location quotients and shift-share components. Hence, an increase in part-time employment may exaggerate business activity. Nevertheless, these analytical techniques can be useful descriptive tools in exposing shifts in industrial composition and the forces responsible for change.

An early call for participative management

Shortly before he left office in 1920, [BLS Commissioner Royal] Meeker warned of the growing bitterness in labor-management relations, lamenting the inability to carry over the cooperative relationships of the war years into peacetime. He cited the British experience of securing worker representation on joint industrial councils and works committees. At home, he saw the resumption of employer opposition to unions and little prospect for continuing such wartime efforts as worker representation on shop committees. "We are today exactly where the British were about 30 years ago," he stated. Meeker's conclusion was more an appeal: "Before abandoning ourselves completely to pessimism and despair, we should at least try the experiment of giving the workers a real voice and responsibility in management."

—Joseph P. Goldberg and William T. Moye
The First Hundred Years of the Bureau of Labor Statistics,
Bulletin 2235 (Bureau of Labor Statistics, 1985).

Flexible and partial retirement for Norwegian and Swedish workers

With a commitment to full employment, both countries encourage older workers to ease the transition from work to retirement; in Sweden, employees can begin at age 60, while in Norway, workers qualify after reaching the normal retirement age of 67

HELEN GINSBURG

Nearly a century and a half before passage of the Social Security Act, Thomas Paine advocated a partial pension. All persons were to receive six pounds annually starting at age 50; a full pension of 10 pounds was to be paid annually from the onset of old age, considered by Paine to be 60 years.

Paine was not only prophetic in recognizing the economic problem posed by old age in industrial societies. Equally significant was his observation that the decade prior to what was considered the beginning of old age was often one of proliferating workplace problems:

> At 50, though the mental faculties of man are in full vigor, and his judgment better than at any preceding date, the bodily powers for laborious life are on the decline. He cannot bear the same quantity of fatigue as at an earlier period. He begins to earn less, and is less capable of enduring wind and weather; and in those more retired employments where much sight is required, he fails apace, and sees himself, like an old horse, beginning to be turned adrift.[1]

Although Paine supported full pensions at age 60 because of the harsh conditions workers faced, he did not advocate mandatory retirement. Rather, the pension was to improve workers' freedom of choice of retirement age. "At 60 his labour ought to be over *at least from direct necessity*. [emphasis added]. It is painful to see old age working itself to death in what are called civilized countries, for daily bread. . . ."[2]

Gradual retirement rare

Old-age and retirement pensions have become standard in the United States and throughout the developed world. While some flexibility of retirement age is part of many social insurance programs, including that of the United States, explicit programs for tapered retirement are rare. However, the issue of gradual retirement has often been raised by specialists in industrial gerontology. Philip L. Rones has observed that in the United States, "when older workers no longer wish, or are unable to work full time, few options short of total retirement are available. Part-time 'phased retirement' is rarely offered, and those jobs that are open to retirees tend to be of the low-skill, low-pay variety."[3] And one of the recommendations at the North American technical meetings held prior to the 1982 United Nations World Assembly on Aging called for alternative work programs for older workers, including phased retirement.[4] Because there is little domestic experience to draw on, examination of some foreign programs can provide useful information regarding gradual retirement.

In the 1970's, both Norway and Sweden incorporated partial pension plans into their social insurance schemes. These plans, which were designed to encourage phased-in retirement, differ considerably. The Swedish plan encour-

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ages partial retirement *prior* to normal retirement age, while the Norwegian plan encourages it *after* attaining normal retirement age. Both systems are examined in this article, with emphasis on the Swedish plan because of its greater popularity, more widespread use, and because it is part of a total pension system that offers an unusual degree of flexibility in both age and extent of retirement.

Recently, attention has focused on problems associated with older Americans. Persons age 65 and over make up nearly 12 percent of the U.S. population. In Sweden and Norway, the respective figures are 16 and 15 percent,[5] proportions that are not projected for the United States until sometime in the 21st century. The preretirement years in these Scandinavian nations have garnered considerable attention and concern.

The goal of full employment

Part of this concern stems from Norway's and Sweden's strong national commitment to full employment and the difficulties in meeting that commitment for all persons, including older workers. By international standards, unemployment rates have been maintained at very low levels. During the 1970's, for example, unemployment—standardized by the Organization for Economic Cooperation and Development (OECD)—averaged 1.7 percent in Norway and 2.1 percent in Sweden, compared to 6.1 percent in the United States and 4.4 percent in the seven major OECD nations.[6] By 1983, unemployment averaged 3.3 percent in Norway and 3.5 percent in Sweden, and in the first three quarters of 1984 the averages had dropped somewhat, to 3.1 and 3.2 percent, respectively.[7] While still low by international standards, these rates are high for both countries. But even in the 1970's, with lower unemployment, joblessness was a problem, especially in Sweden. In the 1980's, with less vigorous economies, unemployment among older workers was exacerbated.

Another concern is the strong social welfare philosophy that complements the full employment ethos common to both nations. Generous income support is provided to persons who cannot work. But the full employment philosophy makes jobs the main societal goal for those who want to work. If that goal cannot be met, income support will be provided. But when there is higher unemployment, income transfers are a greater national economic burden. Equally important, in both countries, income transfers alone are not considered a solution for persons, including those who are older who want to work.

The Norwegian system

Pension eligibility. Until 1973, the general pensionable age in Norway was 70. Since then it has been lowered to 67, which was higher than in Sweden, the United States, and most other nations.[8] (Some occupations have lower pensionable ages; for example, seafarers, 60; fishermen, 62; and forestry workers, 63.) When the pensionable age was lowered, flexible retirement and partial pension possibilities were also introduced. The aim was to enable workers to choose their retirement age between 67 and 70 with the option of tapering off work gradually if they wanted to do so. Thus, persons between 67 and 70 may take 0, ¼, ½, ¾, or all of their old-age pension. However, the pension plus earnings cannot total more than 80 percent of previous earnings.

Until April 1984, persons age 67 to 70 who did not take a full old-age pension earned a "waiting" supplement of 9 percent annually (.75 percent a month) for that portion of the pension that they did not collect. Regardless of earnings, workers age 70 receive a full retirement pension, including any waiting supplement that may have accrued. (Since 1984, the United States has granted full social security old-age benefits without any earnings test or other restrictions to eligible persons age 70 and over.)

When the pensionable age was reduced to 67 years, and flexible retirement and partial pension possibilities were first offered, it was hoped that the options available to older workers would increase. That was not always the case. Many firms reduced their mandatory retirement age to 67.[9] Since 1977, Norway's Worker Protection and Working Environment Act has provided additional protection to older workers. In principle, mandatory retirement policies are illegal to age 70, the same age as under the 1978 amendments to the U.S. Age Discrimination in Employment Act. Unlike the U.S. law, the Norwegian act requires an employer to investigate the possibility of part-time work, or other arrangements, if any employed worker approaching age 67 requests it. In practice, the law is not universal. Workers in occupations in which a lower retirement age is stipulated by law are not covered. It is also possible for a firm to establish a mandatory retirement policy at age 67, if the company and the union agree, and if the company has a supplementary pension plan with full rights payable at age 67. This usually implies that a worker will not lose income through earlier retirement. In fact, those who have not been employed by the particular company long enough (normally 30 to 35 years) do lose. Nonetheless, they are still subject to mandatory retirement at age 67, according to a recent court decision, which is currently under appeal.[10]

Labor force participation. Although 67 is the pensionable age, a substantial proportion of Norwegians withdraw from the labor force at younger ages. Labor force participation starts to decline gradually among the 50- to 59-year-olds, sharply among the 60- to 66-year-olds, and even more precipitously thereafter. While the proportion of 60- to 66-year-old workers remained a constant 56 percent between 1977 and 1982, this stability masks a slight decline among men and slight increase among women. (See table 1.) Except for those age 67 and over, middle-aged and older women increased their labor force participation during this period.

Table 1. Proportion of persons in the labor force in Norway, by age and sex, 1977 and 1982

Age	1977			1982		
	Total	Men	Women	Total	Men	Women
40 to 49	82	97	67	88	96	79
50 to 59	74	91	57	79	92	66
60 to 66	56	75	40	56	72	42
67 to 69	27	38	16	24	35	14
70 to 74	14	22	7	10	15	5

SOURCE: Norway, Central Bureau of Statistics, *Arbeidsmarkedstatistikk, 1982* [Labor Market Statistics, 1982] (Oslo, 1982), table 14, p. 58.

Almost all of the increases in the total labor force participation rates among workers age 40 to 49 and 50 to 59 are caused by greater female participation.

Job problems and unemployment. Although older Norwegian workers may experience job difficulties well before the normal pensionable age, they are less likely than younger workers to lose their jobs. But unemployed older workers remain jobless much longer than others and job loss may lead to withdrawal from the labor force. In 1982, workers age 50 and over accounted for 28 percent of the Norwegian labor force but only 19 percent of the registered unemployed. However, the number of weeks of unemployment rises with age, from 6.4 weeks for those under age 20 to 22.3 weeks among those age 67 and over.[11] (See table 2.) Although the pattern is more pronounced for men, women are generally out of work longer than men, except for those 67 and over.

Many problems faced by older workers are caused by labor-market developments emphasizing productivity, competition, and demands for advanced technology and new methods. These developments have worked against older workers and "persons above 50 years of age often find it difficult to get a new job."[12] Jobless older workers also run into employment problems because they usually have had fewer years of formal education and their work experience has often been in declining industries such as textiles, shoe manufacturing, and woodpulp. In recent years, these industries have been hurt by the international recession and by their lack of technological competitiveness, thus compounding the woes of their aging employees.

Table 2. Average number of weeks of unemployment among the registered unemployed in Norway, by age and sex, 1982

Age	Total	Men	Women
All ages	9.9	9.2	11.0
Under 20	6.4	6.2	6.7
20 to 29	8.6	7.8	10.1
30 to 49	10.4	9.4	12.0
50 to 59	12.2	10.7	14.7
60 to 64	14.2	13.4	14.1
65 to 66	20.9	20.4	22.6
67 and over	22.3	22.9	21.0

SOURCE: Norway, Central Bureau of Statistics, *Arbeidsmarkedstatistikk, 1982* [Labor Market Statistics, 1982] (Oslo, 1982), calculated from table 79.

Special protection. A good deal of emphasis under the Worker Protection and Working Environment Act has been directed toward job and workplace redesign to enable older workers to keep their present jobs. Also, special benefits for older workers are usually carefully constructed to prevent any adverse effect. Since 1976, workers who reach age 60 have been entitled to an extra week of vacation in addition to the statutory 4 weeks. This is financed by the National Insurance Program to relieve individual employers of costs which might further weaken older workers' chances in the labor market.[13]

When dismissals occur, older workers receive additional protection under the Worker Protection and Working Environment Act, which grants all employees at least 1 month's advance notice of dismissal. This increases with age to at least 6 months for a worker age 60 who has been with the same firm for 10 years. Beginning at age 50, some older workers are also entitled to severance pay under a 1966 agreement, amended in 1980, between the Norwegian Confederation of Labor and the Norwegian Employers' Federation.

Initial efforts are generally made by the government labor market authorities to place jobless older workers in regular employment. If efforts prove fruitless, various measures may be applied, including vocational rehabilitation and different forms of subsidized employment at regular wages: temporary public-service employment jobs, originally intended for youths and women, are now also targeted to cover jobless persons age 50 and over who have been unsuccessfully registered for employment with the government labor exchange for at least 3 months; in sheltered workshops, about one-third of the workers are over age 50; jobless workers age 60 and over are assisted by a program which provides jobs with local government and state enterprises; still another subsidy is available for employers who hire workers age 50 and over who have been registered as unemployed for at least 3 months. However, this program, which offers a 50-percent subsidy for wages, vacation pay, and employer contributions to the social insurance fund, has had a very limited effect.[14]

Despite these programs, some unemployment persists. Jobless benefits are generally payable in Norway for up to 40 weeks a year. But unemployed workers age 64 to 67, who are especially susceptible to permanent joblessness, can collect benefits for 52 weeks a year—and if no work is available—until age 67, when old-age benefits begin.

In the softening job market, long-term benefits are sometimes unofficially used to get rid of older workers to save jobs for younger ones. That is, in some firms, union and management have negotiated agreements to "pension off" older workers with unemployment benefits supplemented

by grants from the company to tide them over until age 67. While older workers may have a nominal "choice," strong social pressure can be exerted to get them to "retire," an important factor in small tight-knit communities and workplaces that are deeply concerned with the future of younger workers.[15]

Not all of the unemployed elderly collect jobless benefits. Some receive disability benefits. About 8 of 10 disability pensioners are between age 50 and 67. In its 1982 report to the World Assembly on Aging, the Norwegian Government emphasized the relationship between disability pensioning and unemployment:

> . . . at least 100,000 elderly who 10 years ago would have been gainfully employed are today without opportunities for work. The fact that some elderly persons are granted a disability pension indicates that the labor market of today cannot make use of their working potentialities. The disability pension implies to some extent that *signs* of difficulties in the labor market are hidden by the usual labor market statistics.[16]

Impact. The partial pension has had a limited impact in Norway. That is, poor labor market conditions or poor health push many workers out of the labor market before age 67, when they would be eligible for either a full pension or a partial pension and tapered retirement. Beginning at age 64, changes related to age (so-called "senile decay") are equated with sickness when determinations are made for granting disability pensions. Close to one-third of the workers are on disability pensions when they reach age 67. Most Norwegians draw their old-age pension at 67; 18 percent of men and 6 percent of women that age postpone collecting their pension, while only 3 percent of men and 3 percent of women draw partial pensions; however, by age 69 only 7 percent of men and 2 percent of women are still postponing their pension, while 3 percent of men and 1 percent of women are still collecting the partial pension.[17]

The partial pension's effect is also limited because it encourages partial retirement after the normal—and high—retirement age. Nor is the partial pension usually a viable alternative to retirement for industrial workers in Norway. There are few opportunities for gradual retirement in Norwegian industrial companies. The partial pension is used mostly by farmers and fisherman who are self-employed and least by industrial workers.[18]

Unions, to which about two-thirds of Norwegian workers belong, have taken a critical view of the options available to older workers. Their major target is the retirement age. The influential Norwegian Federation of Trade Unions, with a large blue-collar membership, gives high priority to attaining a statutory reduction of the normal retirement age to 65 years. It is actively striving to meet this priority in the near future, in contrast to the shorter workday or workweek which it supports—but only as a long-term goal. At its Spring 1985 convention, the Federation endorsed lowering the normal retirement age to 65, with a flexible retirement option starting at age 60.[19] The Norwegian Employers' Federation does not favor a general reduction of the pension age. But neither does it oppose granting government disability pensions to some older jobless workers under age 67, especially in small, isolated communities where there is no chance for reemployment.

Lowering the retirement age has emerged as an important issue in the autumn 1985 election campaign. The Labor Party has endorsed an immediate lowering of the pensionable age to 66, with a flexible retirement option starting at age 64. The present coalition government (Conservative, Center, and Christian Democratic parties) has appointed a committee to study pension age and flexible retirement questions (among others). But it has not yet issued its final report and recommendations.

Swedish program popular

In sharp contrast to the limited use of the partial pension in Norway is the Swedish experience. Phased retirement has been a reality for a significant proportion of older workers in Sweden since 1976, when an innovative partial pension became part of that nation's social insurance scheme. Since then, Swedish workers age 60 to 64 have been permitted to reduce their working hours voluntarily and to receive a partial pension that replaces a portion of their lost earnings. There is no actuarial reduction in their old-age benefits, which are payable in full at age 65, without any retirement test.

Partial pensions originated as part of Sweden's full employment policy, which was initially developed over a long period by the Social Democrats. The party has been in power since 1932 (except from 1976 to 1982) and has continued to work in close collaboration with the powerful blue-collar labor federation, the Swedish Confederation of Trade Unions (LO).[20] But now the full employment goal cuts across political party lines. The governments that ruled from 1976 to 1982 continued a full employment policy as well as extensive social welfare measures that had evolved over the previous decades. Swedish workers are highly organized—about 90 percent of blue-collar and more than 80 percent of white-collar workers belong to unions. And full employment is an important part of the agenda of all of organized labor, not just the Swedish Confederation of Trade Unions.

Unemployment. While Sweden's unemployment is low, the impact is widespread. Among those most affected are young people, immigrants, women, the disabled, and older workers; regional disparities compound their difficulties, with the most severe unemployment found in the north. As in Norway, older workers have a great deal of job security as long as they are working but when jobless they are more prone than others to long-term unemployment.[21]

Unemployment is lowest among 45- to 54-year-olds and rises among the 55- to 64-year-olds. The unemployment rate among the 55- to 64-year-olds has worsened relative to

the national rate in recent years. (See table 3.) Much of this reflects the longer duration of their unemployment. In 1983, unemployment was 3.5 percent, higher than in most years. Among the unemployed that year, 10 percent of 16- to 19-year-olds, 15 percent of 20- to 24-year-olds, and 25 percent of 25- to 54-year-olds were out of work for more than 6 months compared to 55 percent of 55- to 64-year-olds.[22] As in Norway and the United States, long-term unemployment among older workers in Sweden often results in withdrawal from the labor force.

Job problems of older workers in Sweden intensified in the late 1960's and early 1970's, partly because of greater employer emphasis on higher productivity. The situation was also worsened by plant closings. But in Sweden, as in Norway, the 1970's was a decade of significant labor legislation aimed at improving the job security of all workers. In recognition of the vulnerability of older and disabled workers, additional safeguards were enacted to prevent them from losing their jobs. In addition to seniority, which protects most older workers, those age 45 and over must be given 6 months notice prior to dismissal. And if they are unable to perform their usual work, employers must find them less demanding tasks. Government-created relief jobs at regular wages, widely used to combat unemployment in Sweden, may be provided. Subsidized employment with private employers, job and workplace redesign, and sheltered workshops for disabled workers are also available. About 40 percent of the workers in the extensive system of sheltered workshops, which pay regular wages, are more than 50 years old. However, although Sweden relies extensively on labor market training as part of its full employment policy, unemployed workers 55 and over are markedly underrepresented among the trainees.[23]

Jobless and disability benefits. Older workers in Sweden, as in Norway, can receive unemployment benefits for a longer time than others. In contrast to the usual 60-week limit, jobless 56- to 64-year-olds can collect unemployment benefits for 90 weeks. Persons age 60 and over who have exhausted their regular benefits can receive cash labor market assistance, which pays less, until the normal pensionable age of 65. More likely, though, they would qualify for a higher-paying government disability pension. (The average worker receives about 88 percent of after-tax income and usually a supplementary union-negotiated private pension as well.[24]) In the early 1970's, reacting to the worsening labor-market situation of older workers, the Swedish Confederation of Trade Unions successfully pressed for an easing of eligibility requirements of government disability pensions for older workers. There is no medical test for workers age 60 and over who are considered permanently unemployed and have exhausted regular benefits or collected cash labor market assistance for 90 weeks.

Worsening economic conditions in Sweden also led to an unofficial practice similar to the one observed in Norway. When faced with a cutback, a company may meet with a local union, especially in a small community, and exert strong social pressure on older workers to be "pensioned off" in order to save the jobs of younger workers. Workers as young as 58 years and 3 months have been "pensioned off"[25]; at that age, regular unemployment benefits (sometimes supplemented by the employer), can be collected for 90 weeks; then, at age 60, a disability pension can be granted without a medical test; finally, at 65, full old-age benefits are available.

Table 3. Unemployment rates in Sweden, by age and sex, 1980, 1982, and 1983

Age	1980			1982			1983		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
16–74[1]	2.0	1.7	2.3	3.1	3.0	3.4	3.5	3.4	3.6
16–19	7.6	6.5	8.8	10.6	9.6	11.6	10.4	9.9	10.8
20–24	3.7	3.5	3.9	6.1	6.3	5.8	6.8	6.7	6.9
25–34	1.8	1.5	2.2	3.1	2.9	3.3	3.4	3.3	3.5
35–44	1.1	.9	1.4	1.8	1.5	2.0	1.9	1.8	2.1
45–54	1.0	.9	1.1	1.6	1.6	1.7	1.7	1.8	1.5
55–64	1.6	1.6	1.6	3.1	3.1	3.0	3.9	4.0	3.8
65–74[2]	0	0	0	0	0	0	.2	.2	.4

[1]The unemployment rate for 16- to 64-year-olds is nearly always the same or practically the same as for 16- to 74-year-olds. The total unemployment rate for 16- to 64-year-olds was 2 percent in 1980, 3.2 percent in 1982, and 3.5 percent in 1983.

[2]Unemployment appears nonexistent because virtually all jobless in this age group drop out of the labor force.

SOURCE: Sweden, Central Bureau of Statistics, Labor Force Sample Surveys. The unemployment rate is the percentage of the labor force that is unemployed.

Pension options

Older workers are not a homogeneous group. Economic factors as well as health, occupation, working conditions, health and work status of a spouse, the presence of an elderly parent, and personal preference may influence decisions about work and retirement. Sweden's national pension system offers workers age 60 to 70 years a wide range of pension options. While those who are faced with unemployment have little choice in the matter of work or retirement, they are assured a disability pension. So are disabled workers. They need not take permanently reduced old-age benefits because nothing else is available, as could happen to an American worker (starting at age 62) who has exhausted jobless benefits or has been denied disability insurance.

In addition to disability payments, the pensions available to Swedish workers are:

(a) A full old-age pension at age 65, without any earnings or retirement test;

(b) A delayed old-age pension with benefit increases of .6 percent for each month (7.2 percent annually) that pension receipt is deferred past age 65, up to age 70; (under the U.S. social security system, a 3-percent annual delayed retirement credit currently applies at the same ages);

(c) An early old-age pension, available at age 60 (compared to age 62 for workers under social security); benefits are permanently reduced by .5 percent for each month they are collected

before age 65. The reduction amounts to 6 percent annually compared to about 6.7 percent under U.S. social security;

(d) A split pension; this unique system allows a worker to collect half of the old-age pension before age 65 at the reduced rate and to delay receipt of the other half until age 65; at that time, the part of the pension that was not previously drawn would also be paid, without any benefit reduction; because there is no earnings test, a person can receive either an early (reduced) old-age pension or a split pension while working;

(e) A partial pension; this enables a person to reduce his or her working hours, receive *full pay* for the time worked and also receive a partial pension that *replaces part of the lost earnings*; there is no actuarial reduction in the old-age pension at age 65, which makes the partial pension especially attractive.[26]

Origin of the partial pension

Perhaps the most interesting option for a Swedish worker is the partial pension. The impetus for this pension came from organized labor. Proposed at the 1973 Congress of the Metalworkers, then the largest union affiliated with the Swedish Confederation of Trade Unions, it was viewed more as a social reform than as a labor market reform. The aim was to provide a bridge between work and full-time retirement and to ease the abrupt shock of retirement after a lifetime of work.

In 1974, a Parliamentary Commission was established to investigate the matter further. By 1975, legislation was enacted. The partial pension became effective in 1976, at the same time that the normal pensionable age was reduced from 67 to 65. Prior to enactment, members of the medical profession and some psychologists supported unions in their desire for a more gradual transition to retirement. It is important to note that, officially, the partial pension was not proposed as a measure to combat unemployment. Rather, its stated purposes are: (1) to increase flexibility and freedom of choice about retirement; (2) to provide for a smoother transition from work to retirement; and (3) to ease working conditions during the last years of work.[27] Swedes do not view pensions as a "solution" to unemployment for persons who want to work. For example, the main argument against disability pensions for older unemployed workers in Sweden is not based on economics. Instead, it is based on concern that such pensions lead to social isolation, a self-identification as disabled, and as Professor Eskil Wadensjö of the Swedish Institute of Social Research puts it, to the feeling that "the members of this group, usually pensioned for medical reasons, will only feel sicker and perhaps will even worsen physically and mentally."[28] The Swedish version of the partial pension avoids those possibilities as well as the possible stigmatization of being disabled. Those were also important reasons for the introduction of the partial pension and for the split (reduced) old-age pension. The benefits of the latter are too small to compete with other pension forms, except for those ineligible for the partial pension. The partial pension is also available to workers not threatened by unemployment and might enable some workers who are unable to function full time to avoid disability pensioning. Thus, extending freedom of choice is an important part of the logic of the partial pension. Although the partial pension was not officially presented as a means of countering unemployment, growing concern regarding joblessness was part of the milieu in which the idea took root.

In Sweden, employers are also highly organized. The Swedish Employers' Confederation (SAF), the dominant organization of employers in the private sector, did not support legislation to provide partial pensions. Instead, the Confederation preferred to work out a plan through negotiations with unions, an approach with a long precedent in Swedish industrial relations. However, once legislation was enacted, the Confederation issued a recommendation to affiliated members to take a cooperative attitude toward part-time work for those who met other conditions for entitlement. Other employers' associations issued similar directives. Timing facilitated cooperation. The partial pension was introduced at a time when it was advantageous for many companies to reduce employment. Despite low unemployment, the tight labor markets characteristic of the 1960's were no longer the rule. Nor have they since returned. And with extra legal protection for older workers, a reduction in personnel would normally mean a loss of younger workers.

How the pension works

Persons age 60 to 64 must meet certain qualifications to become eligible for partial pensions. Because the pensions are geared to part-time work, hours must be reduced by an average of at least 5 a week and, after reduction, must still average at least 17 weekly. A worker must also have had pensionable earnings for at least 10 years after age 45, and have had gainful employment for at least 5 of the last 12 months. (Under Swedish law, unemployment benefits and sickness benefits are considered pensionable income, so collecting them during those 12 months would not disqualify a person from a partial pension.) The partial pension pays 50 percent of lost earnings up to a limit, which covers the earnings of nearly all blue-collar workers and about 80 percent of those of salaried employees. Although covered by the partial pension, earnings of executives and middle management generally exceed the covered amount.[29] Like all pensions in Sweden, the partial pension is taxable income. Because of Sweden's high marginal taxes, actual disposable income from the combined partial pension and part-time earnings is substantial. Many workers receive from 80 to 85 percent of their prior net earnings. Until 1981, the pension paid 65 percent of lost earnings and workers in the commonest tax brackets received about 85 to 90 percent of prior net earnings.[30]

The partial pension is financed by a payroll tax of .5 percent, higher than at the onset of the program. Additional funds come from general revenues. This has not been a major issue. Partial pensioners are only one of several groups of 60- to 64-year-olds with some type of early retirement

benefit. In 1982, about 25 percent of 60- to 64-year-olds received disability benefits; by contrast, 13 percent received partial pensions and 3 percent collected early retirement (reduced old-age) pensions.[40] (In that age group, widows as well as some wives of old-age and disability pensioners also receive various payments.) The present government has declared that when the economy permits such a reform, it will give high priority to restoring the replacement rate of the partial pension to 65 percent, which is not considered an expensive reform. This is strongly supported by unions and has aroused only minor criticism by others. Most of the debate questions whether the proposed measure should get priority over other reforms, such as improving help to the aged, the sick, and the handicapped. The more intense controversy centers on the extent of disability pensioning of older workers. Critics contend that the government should give greater emphasis to policies that lead to more jobs rather than more pensioning.[41]

Who takes the option

With so many options, it is significant that many older workers have elected to work part time and take the partial pension. The number of partial pensioners increased rapidly in the first years of the program's existence (table 4). The program became so popular that to curb costs the nonsocialist government reduced the replacement rate to 50 percent. The program's extremely rapid growth in 1980 and the sharp rise in the number of applicants represents the rush of persons to get the pension on the more favorable 65-percent replacement rate. The 50-percent rule, effective for new applicants in January 1981, has resulted in a decrease in the number of beneficiaries and has also made it more difficult for low earners, among others, to afford to take the pension. A study conducted by the Swedish National Social Insurance Board and Stockholm University, when the replacement rate was 65 percent, found that the majority of pensioners surveyed had not experienced any appreciable reduction of expenditures. However, single pensioners were more cognizant of a loss of income. Economic reasons were often cited by workers who expressed a lack of interest in taking the pension.[31] The pension is indexed for inflation, as are all social insurance benefits.

A person applying for a partial pension at the social insurance office must be informed about other possible options, including a disability pension, if eligible. In addition to full disability pensions, there are half and two-thirds pensions for those with lesser disabilities. Both of these can be combined with work.

But most of the disabled (or permanently unemployed) older workers receive full pensions. Because it is relatively easy for 60- to 64-year-olds to get a disability pension based on medical reasons, an applicant for a partial pension could end up with a disability pension. The partial pension has a higher status and is more acceptable in Sweden than a disability pension. Therefore, some workers who are eligible for both choose the partial pension, even if the income is a little less.[32]

Women. It is more difficult for women to qualify for the partial pension. The pension was designed to enable full-time workers to cut their hours and many Swedish women normally work part time. Women are also less likely to have had 10 years of pensionable earnings after age 45. Although the labor force participation rates of Swedish women have risen rapidly and exceed that of American women, the gap between female and male participation rates is more pronounced among those over age 55. Despite these factors, there has been a slow but steady increase in women's share of these pensions, from 30 percent in 1976 to 36 percent in 1983. (See table 4.)

Self-employed. The self-employed, not originally covered by the partial pension, have been included since 1980. However, they are less likely than employees to collect it. In 1981, 24 percent of all eligible Swedish workers were receiving the partial pension compared to only 8 percent of the eligible self-employed.[33] One reason for the latter's low participation is that they are subject to more stringent rules. Their working time must be cut by at least 50 percent and still average at least 17 hours weekly; employees, by contrast, may reduce their average weekly hours by as few as 5, as long as they still work an average of at least 17 hours weekly.

Occupation. The partial pension is especially appealing to blue-collar workers. They are more likely to be doing physical labor which often becomes more difficult to perform with increasing age. Blue-collar workers, whose jobs often are less fulfilling, typically enter the labor force at younger ages than others and the need for tapered retirement may be greater.

An interesting aspect of the Swedish partial pension is that its appeal has spread from blue-collar to white-collar workers. In 1977, for example, 35 percent of newly granted partial pensions that were awarded to men who belong to

Table 4. Applicants, total beneficiaries, percent women beneficiaries, and beneficiaries as percent of those eligible for partial pensions in Sweden, 1976–83

Year[1]	Applicants	Beneficiaries		
		Total	Percent women	As percent of those eligible
1976	20,422	14,560	30	7
1977	21,445	31,509	30	12
1978	19,621	41,913	30	16
1979	21,614	48,654	31	22
1980	37,408	67,837	31	27
1981	14,026	64,641	33	24
1982	14,800	61,732	35	22
1983	5,5C0	58,082	36	21

[1]Data as of December of each year, except for 1983, which is for June.

SOURCE: Swedish National Social Insurance Board.

union-sponsored unemployment insurance societies went to blue-collar workers represented by the Metalworkers union. Only 7 percent went to members of the society that represents white-collar workers in private industry. By 1982, the respective figures were 16 percent (blue-collar Metalworkers) and 27 percent (white-collar workers in private industry).[34] Among women, white- and blue-collar workers also avail themselves of the pension.

Region. Unemployment has a strong regional dimension in Sweden. One might expect a heavier concentration of partial pensioners in areas with the highest unemployment. That is not the case. The rate of disability pensioning is higher in those areas. Stockholm County, for example, has a higher proportion of partial pensioners than Jämtland County in the north, where unemployment is much more severe; but a higher proportion of 60- to 64-year-olds in Jämtland County than in Stockholm County collect disability benefits.[35] In the north, where unemployment is most pervasive, opportunities for part-time work are also scarce. One cannot work part time at a nonexistent job or in a plant that has closed.

In 1983, about 21 percent of all persons eligible for the partial pension were receiving it. (See table 4.) This proportion is lower than it was before the replacement rate was cut to 50 percent. But considering the various pension options available to 60- to 64-year-old Swedish workers, this figure attests to the partial pension's continued popularity. When given a choice, a substantial portion of Swedish workers have indicated their preference for a combination of work and retirement. But how was this accomplished? How have hours been reduced?

Can hours be reduced in a wide variety of industries and occupations? If so, how? The answers to these questions were crucial to the success of the partial pension. Successful implementation required management cooperation in reducing hours. This was especially important because eligibility for the pension is established according to rules concerning prior work history. But the law does not mandate that employers must grant the needed reduction in hours.

Implementation of reduced hours proceeded with surprising smoothness. The Swedish Employers' Confederation reports that it hears of relatively few problems involving implementation from its members.[36] In one study of 28 workplaces, each with very different characteristics, fewer than 1 percent of applications for part-time employment were denied.[37]

The specific ways that hours have been reduced fall into several patterns. The overwhelming proportion of partial pensioners reduce them to between 17 and 24 hours a week. The most popular pattern is working fewer days a week, followed by working alternate weeks. More than 7 of 10 employees work one of these patterns. It is less common to work shorter days, although women are more likely than men to do so. Men and women have differed in making other changes. Women are much more likely to work fewer days per week than men and less likely than men to work alternate weeks. The self-employed, who may find it difficult to stop working for long intervals, also show a different work pattern. The majority work shorter days, with fewer days next in popularity. They rarely work alternate weeks. The flexibility of the partial pension enables some Swedes to work alternate months, although only 1 percent do so.[38] The maximum interruption of work allowed is 1½ months.

Most partial pensioners continue to work at the same job, for the same firm. Once working hours have been reduced, it is unusual for workers to change them again. That is, rather than gradually tapering off working hours, most partial pensioners go from full time to about half time and remain there.[39]

Impact on pensioners and labor force

The partial pension has had a positive effect on its recipients. Partial pensioners value their increased leisure and many report that they are more rested. Their health seems to improve and absenteeism declines.[42] These factors account for a feeling among employers that partial pensioners produce more per hour than full-time workers. They are also less likely than full-time workers of the same age to become disabled or unemployed. Relatively few receive disability pensions and most remain on the partial pension until age 65.[43]

The partial pension was not designed to be a weapon against unemployment. Nor is it very helpful to jobless older workers. It may, however, act as a form of worksharing. Although it is estimated that only about half of the reduced hours are replaced with new hiring, the partial pension also prevents dismissals in some firms.[44]

According to a recent study, the partial pension has also worked against, but has not eliminated, the strong tendency for early retirement.[45] If the partial pension did not exist, more 60- to 64-year-olds might receive disability or early retirement (reduced old-age) benefits.

Even though it is not difficult for Swedes age 60 to 64 to receive generous disability or other retirement pensions, they are much more likely than their American counterparts to be in the labor force. The availability of the partial pension, legal protection, and other special efforts to maintain older workers on their jobs, Sweden's lower unemployment, as well as the ability to retire early under many U.S. private pensions, may be among the various contributory factors. In 1982, 57 percent of 60- to 64-year-old Swedes were in the labor force compared to 44 percent of Americans that age (table 5). Participation among 55- to 59-year-olds is also higher in Sweden (table 5).

The trend toward early withdrawal from the labor force has also been proceeding much more rapidly in the United States. Between 1977 and 1982, labor force participation

Table 5. Labor force participation rates of older workers in Sweden and the United States, by age and sex, 1982[1]

Workers	Age		
	55–64	55–59	60–64
Total:			
Sweden	68.1	79.5	57.0
United States	55.1	64.8	44.4
Men:			
Sweden	77.7	87.2	81.9
United States	70.2	81.9	57.2
Women:			
Sweden	58.9	72.1	46.2
United States	41.8	49.6	33.4

[1]Swedish figures include career military personnel while U.S. figures refer to the civilian labor force. According to the U.S. Bureau of Labor Statistics, this difference in measurement has a negligible impact on participation rates for these age groups.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, and Sweden, Central Bureau of Statistics, Labor Force Survey.

of Swedes age 60 to 64 actually rose from 54 to 57 percent. This masked opposing trends: a slight decrease among men (from 70 to 68 percent) coupled with an increase among women (from 38 to 46 percent). In the United States, the overall rate fell sharply (from 55 to 44 percent) with decreases among both men (from 70 to 57 percent) and women (from 41 to 33 percent).[46]

Despite generous delayed retirement credits and the ability to collect a full old-age pension at 65 without any retirement test, retirement at age 65 is typical. The labor force participation of 65- to 74-year-olds was only 8 percent in 1982 (13 percent for men and 14 percent for women). This is only 41 percent of the 1968 rate.[47] Most of the drop actually occurred *before* the formal reduction of the pensionable age to 65 in 1976.

The special protection given older workers usually ends at 65 and there is no law against mandatory retirement policies at that age. With few exceptions (for example, university professors), an employer could force workers to retire. In practice, that is rarely done, because retirement at age 65 is so widely accepted and is not presently opposed by either unions or management. Some latent desire for jobs among those over age 65 is acknowledged to exist but with concern over youth unemployment, it is a low priority issue. "The right to work after reaching pensioning age should be regarded as just as fundamental as that of retirement in economic security," states the Swedish report to the U.N. World Assembly on Aging, "but this must be set off against, in particular, the equally justified demand of youth for employment."[48]

Contrast

The national pension systems of Norway and Sweden both have flexibility in determining the age and extent of retirement. In Norway, these options are available only after attaining the full pensionable age of 67. This has curbed their usage. Among many persons 67 and over there may be a lack of desire or an inability to work; others are deterred by a paucity of part-time employment opportunities for older workers. Further, unions are urging a reduction of the full pensionable age to age 65, with flexible retirement options starting at age 60. These have become major political issues and it is likely that some changes along these lines will be implemented in coming years.

In Sweden, options exist between the ages of 60 and 70. But they are mostly used before the full pensionable age of 65—and the partial pension can only be used before that age. Employer cooperation in arranging part-time schedules has helped make the partial pension a reality for many Swedish workers. But the decrease in the replacement rate has curbed its growth.

Withdrawal from the labor force before the full pensionable age is common in both countries but is less widespread than in the United States. And neither Norway nor Sweden is experiencing the sharp decline in the labor force participation of older workers in the preretirement years that the United States is currently experiencing. For older workers (beyond a certain age), both Norway and Sweden have relaxed eligibility standards for disability pensions; and both allow older long-term jobless workers to collect unemployment benefits until attaining the full pensionable age. These serve as auxiliary early retirement pensions. But they are considered inferior to jobs as a solution for those who want to work. Thus, both nations stress the need for full employment and emphasize programs that enable workers to remain employed during the preretirement years.

Implications

Some of the differences that exist between the United States and the Scandinavian societies studied in this article include size, homogeneity of the population, values, politics, the extent of unionization, the role of unions, labor-management relations, and tolerance for high taxes. Nevertheless, developments in Norway and Sweden, which already have more elderly populations than the United States, could provide the starting point for a discussion of a comprehensive older-worker policy in the United States. Policies to maintain employment of older workers, income support programs for older workers who are unable to work or to find work, and greater flexibility of age and extent of retirement are all interrelated. All are possible points of departure for discussion and further study, even if the specifics vary. Consider one example.

Sweden's partial pension is one of the most popular and innovative of the programs studied. Could it be adapted to the United States? Such a system might enable more older workers who cannot function full time to remain in the work force part time. It might also induce others to do so. Part-time work is not banned under the present social security system. While part-time work among recently retired beneficiaries is not unusual,[49] the earnings test is more restrictive for those under age 65. It may act as a deterrent

to some workers.[50] The lack of *satisfactory* part-time work is another deterrent.[51] Further, it is not possible to work part time and defer part of social security benefits until age 65.

The feasibility of a partial pension option might also be considered by private and public employment pension systems and in collective bargaining. Very few U.S. companies allow workers to continue part-time employment while drawing part of their pension. John Deere is an exception.[52] But it is not uncommon for firms to have "cordial compulsion" campaigns for early retirement. Forty percent of Fortune 500 companies have had them.[53] In 1983, New York State had a plan to allow workers to retire a few years earlier. The short-term goal was to balance the budget. But a negative consequence was that some agencies lost considerable numbers of their most experienced workers.[54] None was offered the option of part-time work and a partial pension.

Sweden's experience with the partial pension plan demonstrates that reductions in hours can be implemented in a wider variety of ways and in more occupations than the conventional wisdom suggests, especially when management is cooperative.

There is reason to believe that American workers would favor a partial pension plan. For example, a 1981 Harris survey found that of the 55- to 64-year-old workers polled, 4 of 5 expressed a desire to combine part-time work with retirement.[55] Thus, some form of partial pension deserves careful consideration in the United States.

In the future, the need for additional options for older workers will increase considerably. Beginning in the year 2000, the age for collection of full social security benefits is slated to gradually rise to 67 years by 2027. The Norwegian experience illustrates some problems posed by a retirement age of 67, even when unemployment is considerably lower than in the United States. Congress has already mandated a study of the implications of this future change in the retirement age for workers who may be in poor health or who may be unable to work because of physically demanding work. (Others, of course, may suffer considerable loss of income because of permanent job loss before the full social security pensionable age, as is often the case at present.) The Norwegian and Swedish experiences provide many viable alternatives for employment and pension policies for older workers that are worthy of further study. □

——FOOTNOTES——

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[8] *Aging in Norway*, p. 38.

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[11] Norway, Central Bureau of Statistics, *Arbeidsmarkedstatistikk, 1982* [Labor Market Statistics, 1982] (Oslo, 1982). Calculated from table 79, p. 180.

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[39] Social Insurance Board, *Delpension*.

[40] *Ibid.*, tables B 3, B 4, and B 5, pp. 246–48.

[41] See, for instance, Hans Berglind, "Pension or Work? A Growing Dilemma in the Nordic Welfare States," *Acta Sociologica*, 1978, *Supplement*, pp. 181–91, which criticizes this tendency in Sweden and the other Nordic nations, where similar patterns exist. This Nordic pattern is analyzed in Nordic Council of Ministers, "*Labor Market—Open or Closed?* Employment for specific groups in the labor market": Report of NAUT project 160.21–1.10 (Stockholm, 1982), especially pp. 27–29, which also specifically mentions Swedish thought. Wadensjö, "Labor Market Policy," pp. 78–82, presents the issue, as it is argued in Sweden.

[42] Social Insurance Board, *Delpension*, p. 208.

[43] *Ibid.*, table 5.3, p. 49.

[44] Crona, "Flexible Retirement," p. 8.

[45] Social Insurance Board, *Delpension*, p. 214.

[46] U.S. Department of Labor, Bureau of Labor Statistics, and Sweden, Central Bureau of Statistics, Labor Force Survey.

[47] Sweden, Central Bureau of Statistics, Labor Force Survey.

[48] Sweden, National Commission on Aging, *Just Another Age*, p. 56.

[49] Alan Fox, "Income Changes At and After Social Security Benefit Receipt: Evidence from the Retirement History Study," *Social Security Bulletin*, September 1984, pp. 3–23.

[50] *Ibid.*, p. 4.

[51] U.S. Senate, Special Committee on Aging, *Aging and the Work Force: Human Resource Strategies*, Committee Print, 97th Cong., 2d sess., p. 35.

[52] Malcolm H. Morrison, "U.S. and International Retirement Concerns," in *Effecting Options for Income and Life Satisfaction: the Norway and Sweden Experience*, pp. 19–21.

[53] Elizabeth Fowler, "The Early Retirement Programs," *The New York Times*, Apr. 25, 1984.

[54] Suzan Chira, "State is Finding Early Retirees Make Problems," *The New York Times*, May 4, 1983, p. B 1. In 1984, another early retirement offer was made, again without part-time work and pension possibilities.

[55] Special Committee on Aging, *Aging and the Work Force*, p. iv.

Research Summaries

Occupational salary levels for white-collar workers, 1985

CARL PRIESER

White-collar salaries increased moderately between March 1984 and March 1985, according to the Bureau of Labor Statistics' survey of pay for professional, administrative, technical, and clerical occupations in medium and large firms. Salary levels rose between 3 and 6 percent for most of the 25 occupations, compared with those in the March 1984 survey. In contrast, occupational salary increases averaged about 7 percent yearly during the 1970's and rose to more than 9 percent in 1981 and 1982 before starting to drop back in 1983. (See table 1.) The annual survey is used in the pay comparability process for Federal white-collar employees.[1]

Although the survey focuses on individual occupations and work levels, it also permits a look at salary trends by skill level. In this connection, occupational work levels were grouped into three broad categories of skill levels comparable to grades 1 to 4, 5 to 9, and 11 to 15, respectively, of the Federal Government's General Schedule (GS). (See table 2 for identification of the survey job classifications by GS grade.) Cumulative percentage increases over the past 5 years have been largest for the higher levels (45.4 percent)—5 to 6 percentage points more than for middle (40.8) and lower (39.4) groups. In 1984–85, pay increases for the highest skill group again set the pace, averaging 5.9 percent, compared with 4.2 percent for each of the other two groups.

A closer look at some individual job classifications reveals that the pay differential between entry-level professionals and their experienced coworkers widened during the first half of the 1980's, as the latter generally recorded substantially larger salary increases. The following tabulation illustrates this point for four professional occupations. It shows average salaries for journeyman classifications (GS-11 equivalents) as a percent of the average paid to their corresponding entry-levels (GS–5).[2]

	1980	*1985*
Accountant	173	183
Auditor	180	186
Chemist	171	174
Engineer	147	150

It is noteworthy that the journeyman to entry-level differential for engineers continues to be much smaller than for the other professions studied. To a great extent, this reflects the strong demand for engineers that has bolstered their starting salaries. For example, in 1985, the average salary for entry-level engineers was 21 percent higher than that for starting chemists, while at the journeyman level the difference was 4 percent (table 2).

In 1985, the survey's highest salary average was for top-level (VI) corporate attorneys at $91,690 a year; this was more than four times the average for most entry-level professional classifications studied. These extremes reflect the wide

Table 1. Percent increases in occupational pay levels, national survey of professional, administrative, technical, and clerical pay, March 1970 to March 1985

Occupation	Average annual percent increases					
	1970 to 1980[1]	1980 to 1981	1981 to 1982	1982 to 1983	1983 to 1984	1984 to 1985
Accountants	7.3	10.0	9.6	6.9	4.7	4.8
Chief accountants	7.9	9.5	11.4	4.2	5.7	6.2
Auditors	6.6	10.3	9.4	6.1	8.0	3.8
Public accountants	(1)	7.9	6.6	7.1	2.3	4.3
Job analysts	7.0	7.6	9.2	6.7	5.3	5.8
Directors of personnel	7.8	11.4	9.6	8.3	5.3	6.5
Attorneys	7.0	9.8	11.4	7.6	4.8	5.9
Buyers	7.0	9.8	9.4	6.2	5.3	3.8
Chemists	7.2	9.4	10.4	5.8	5.3	5.6
Engineers	7.0	10.9	10.2	7.1	5.2	4.9
Engineering technicians	7.2	10.2	9.4	5.9	4.9	3.7
Drafters	7.3	10.9	8.4	7.6	3.6	3.7
Computer operators	(1)	—	8.9	6.8	—	4.2
Photographers	(1)	—	9.7	8.1	6.9	2.3
Computer programmers	(1)	—	—	6.5	—	4.5
Systems analysts	—	—	—	—	—	4.0
Accounting clerks	6.7	9.6	8.9	8.1	3.8	4.8
File clerks	6.9	8.0	7.2	6.4	2.1	3.7
Key entry operators	7.3	8.2	9.4	7.3	3.4	3.6
Messengers	6.7	9.7	6.4	9.2	2.9	4.1
Personnel clerks/assistants	(1)	—	10.2	9.7	5.4	2.7
Purchasing assistants	(1)	—	—	9.3	6.8	5.1
Secretaries	(1)	—	9.2	7.1	5.0	4.7
Stenographers	8.4	12.1	13.8	8.6	5.5	4.9
Typists	7.1	10.2	10.1	6.8	2.0	5.9

[1]Average was not computed when data were available for fewer than 8 years.

NOTE: Dashes indicate that data were not available for one or more years because the survey occupation was newly added or the definition was revised.

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Table 2. Average salaries for selected occupations, national survey of professional, administrative, technical, and clerical pay, March 1985

Occupational level and Federal GS grade equivalent	Number of employees[1]	Average annual salaries[2]
Accountants and auditors		
Accountants I (GS–5)	12,465	$20,577
Accountants II (GS–7)	22,874	25,349
Accountants III (GS–9)	36,599	30,037
Accountants IV (GS–11)	21,232	37,607
Accountants V (GS–12)	7,841	46,879
Accountants VI (GS–13)	1,612	59,519
Chief accountants I (GS–11)	764	37,557
Chief accountants II (GS–12)	1,127	46,517
Chief accountants III (GS–13)	648	60,466
Chief accountants IV (GS–14)	224	74,735
Auditors I (GS–5)	1,855	21,128
Auditors II (GS–7)	3,627	25,854
Auditors III (GS–9)	5,185	31,246
Auditors IV (GS–11)	2,345	39,243
Public accountants I (GS–7)	10,596	19,657
Public accountants II (GS–9)	9,886	22,134
Public accountants III (GS–11)	8,221	25,891
Public accountants IV (GS–12)	3,877	31,416
Attorneys		
Attorneys I (GS–9)	1,184	29,886
Attorneys II (GS–11)	3,046	37,256
Attorneys III (GS–12)	4,556	47,742
Attorneys IV (GS–13)	3,466	59,087
Attorneys V (GS–14)	1,823	73,805
Attorneys VI (GS–15)	481	91,690
Buyers		
Buyers I (GS–5)	6,373	20,896
Buyers II (GS–7)	18,061	25,606
Buyers III (GS–9)	18,224	31,774
Buyers IV (GS–11)	5,545	39,306
Programmers and systems analysts		
Computer programmers I (GS–5)	14,201	20,318
Computer programmers II (GS–7)	34,235	23,690
Computer programmers III (GS–9)	44,128	28,367
Computer programmers IV (GS–11)	19,279	33,708
Computer programmers V (GS–12)	8,517	41,288
Systems analysts I (GS–9	20,649	28,197
Systems analysts II (GS–11)	42,666	33,465
Systems analysts III (GS–12)	34,202	39,663
Systems analysts IV (GS–13)	12,785	46,729
Systems analysts V (GS–14)	2,688	56,461
Systems analysts VI (GS–15)	179	68,809
Personnel management		
Job analysts I (GS–5)	157	20,774
Job analysts II (GS–7)	472	23,602
Job analysts III (GS–9)	670	29,905
Job analysts IV (GS–11)	590	36,983
Directors of personnel I (GS–11)	1,767	37,173
Directors of personnel II (GS–12)	2,079	45,764
Directors of personnel III (GS–13)	1,233	59,317
Directors of personnel IV (GS–14)	363	70,663
Chemists and engineers		
Chemists I (GS–5)	3,096	22,631
Chemists II (GS–7)	5,768	26,722
Chemists III (GS–9)	9,609	32,461
Chemists IV (GS–11)	10,101	39,418
Chemists V (GS–12)	8,843	47,706
Chemists and engineers—Continued		
Chemists VI (GS–13)	4,174	$58,210
Chemists VII (GS–14)	1,093	68,710
Engineers I (GS–5)	31,121	27,405
Engineers II (GS–7)	59,275	30,275
Engineers III (GS–9)	135,494	34,348
Engineers IV (GS–11)	148,785	40,991
Engineers V (GS–12)	106,966	48,366
Engineers VI (GS–13)	54,701	56,136
Engineers VII (GS–14)	13,958	65,641
Engineers VIII (GS–15)	2,490	76,205
Technical support		
Engineering technicians I (GS–3)	5,239	16,876
Engineering technicians II (GS–4)	18,697	19,339
Engineering technicians III (GS–5)	33,464	23,179
Engineering technicians IV (GS–7)	37,435	27,259
Engineering technicians V (GS–9)	19,717	31,386
Drafters I (GS–2)	2,135	13,208
Drafters II (GS–3)	8,190	16,488
Drafters III (GS–4)	19,336	20,006
Drafters IV (GS–5)	20,949	23,950
Drafters V (GS–7)	15,763	29,876
Computer operators I (GS–4)	9,305	13,670
Computer operators II (GS–5)	32,988	16,973
Computer operators III (GS–6)	23,039	20,664
Computer operators IV (GS–7)	8,573	24,016
Computer operators V (GS–8)	1,416	28,440
Photographers I (GS–4)	219	17,571
Photographers II (GS–5)	727	22,019
Photographers III (GS–7)	806	26,489
Photographers IV (GS–9)	365	30,210
Clerical		
Accounting clerks I (GS–2)	27,038	12,380
Accounting clerks II (GS–3)	76,029	14,728
Accounting clerks III (GS–4)	50,107	17,327
Accounting clerks IV (GS–5)	17,868	21,106
File clerks I (GS–1)	16,778	10,101
File clerks II (GS–2)	8,781	11,836
File clerks III (GS–3)	1,962	14,707
Key entry operators I (GS–2)	45,527	13,200
Key entry operators II (GS–3)	29,908	16,600
Messengers (GS–1)	9,356	11,685
Personnel clerks/Assistants I (GS–3)	1,787	14,023
Personnel clerks/Assistants II (GS–4)	3,120	16,375
Personnel clerks/Assistants III (GS–5)	2,545	18,870
Personnel clerks/Assistants IV (GS–6)	1,353	22,355
Purchasing assistants I (GS–4)	3,804	16,363
Purchasing assistants II (GS–5)	3,798	21,135
Purchasing assistants III (GS–6)	1,062	28,150
Secretaries I (GS–4)	53,266	15,869
Secretaries II (GS–5)	61,039	17,721
Secretaries III (GS–6)	111,029	19,988
Secretaries IV (GS–7)	47,854	22,520
Secretaries V (GS–8)	17,227	26,210
Stenographers I (GS–3)	9,093	18,391
Stenographers II (GS–4)	5,966	20,914
Typists I (GS–2)	19,976	12,621
Typists II (GS–3)	13,119	15,847

[1]Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed.

[2]Salaries reported relate to the salaries that were paid for standard work schedules; that is, the straight-time salary corresponding to employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living adjustments and incentive earnings are included.

NOTE: The following occupational levels were surveyed but insufficient data were obtained to warrant publication: Chief accountant V; director of personnel V; chemist VIII; computer operator VI; personnel clerk/assistant V; and photographer V. The programmer/programmer analyst title has been shortened to "computer programmer" in 1985; the definition, however, is unchanged from 1984.

range of duties and responsibilities represented by all professional categories covered by the survey.

In the clerical area, differing functions and skill levels also produce wide variations, although not as wide as for professionals. For example, annual pay averages for top-level secretaries (V) ($26,210) and purchasing assistants (III) ($28,150) were 2.5 times the average of clerks ($10,101) doing routine filing.

In contrast to these types of comparisons, the typical spread among job categories with equivalent levels of work, was relatively narrow. See, for example, accountants I and accounting clerks IV in table 2.

The Bureau's most recent additions to the survey were two computer science occupations—programmers in 1982 and systems analysts in 1984. Programmer trainees (level I) averaged $20,318 a year; this was approximately half the average of level V workers who plan and direct large computer programming projects or solve unusually complex programming problems. Computer systems analysts I averaged $28,197 a year. This level includes workers who are familiar with systems analysis procedures and are working independently on routine problems. Systems analysts VI averaged $68,809 a year. At this level, analysts are senior managers responsible for the development and maintenance of very large and complex systems.

A DETAILED ANALYSIS of white-collar salaries and complete results of this year's survey are contained in the *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1985*, BLS Bulletin 2243, August 1985. It includes salary distributions by occupational work level, and relative employment and salary levels by industry division for the 25 occupations studied. □

———*FOOTNOTES*———

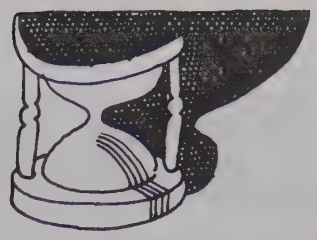
[1]The National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC) is conducted by the Bureau of Labor Statistics, but survey occupations and coverage such as establishment size and the private industries to be included are determined by the President's Pay Agent—the Secretary of Labor and the Directors of the Office of Management and Budget and the Office of Personnel Management. The Agent has designated the industrial coverage and minimum size establishment as follows: manufacturing, transportation, communications, and public utilities, 100 or 250 employees; mining and construction, 250 employees; wholesale trade, 100 employees; retail trade, 250 employees; finance, insurance, and real estate, 100 employees; and selected services, 50 or 100 employees. The pay-setting role of the PATC survey is described in George L. Stelluto's "Federal pay comparability: facts to temper the debate," *Monthly Labor Review*, June 1979, pp. 18–28.

[2]Except for engineers, this widening of differentials continues an earlier trend. For example, the journeyman to entry-level ratio in 1975 was 162 for accountants, 166 for auditors, and 163 for chemists. The engineer ratio was 151 in 1975.

A similar pattern was found for the 1980–85 period in the salary relationship of recent law school graduates with bar membership (attorneys I, GS–9 equivalents) and attorneys with experience handling legal work with few precedents (attorneys III, GS–12 equivalents). The salary relatives were 158 in 1980 and 160 in 1985. (In 1975, the corresponding relative was 148.)

In the survey coding scheme, the level designations among various occupations are not synonymous: For example, the first level of attorneys equates to the third levels of accountants, chemists, and most other professional and administrative occupations. Classification of employees in the occupations and work levels surveyed is based on factors detailed in definitions which are available upon request.

Major Agreements Expiring Next Month

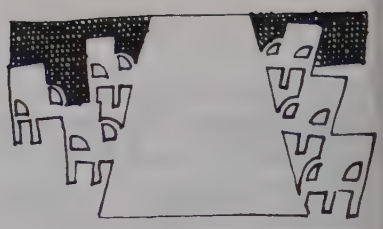


This list of selected collective bargaining agreements expiring in November is based on information from the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more. Private industry is arranged in order of Standard Industrial Classification.

Employer and location	Private industry	Labor organization[1]	Number of workers
Heavy-Highway Contractors Association of Iowa (Des Moines, IA)	Construction	Operating Engineers	1,300
Painting and Decorating Contractors Association (St. Louis, MO)	Construction	Painters	1,800
Outerwear Manufacturers (Interstate)	Apparel	Clothing and Textile Workers	18,000
Londontown Corp. (Maryland)	Apparel	Clothing and Textile Workers	1,900
Allied Printing Employer's Association (Philadelphia, PA)	Printing and publishing	Graphic Communications	1,200
Colgate–Palmolive Co. (Interstate)	Chemicals	Chemical Workers; Oil and Chemical Workers; Employees Association, Inc. (Ind.)	2,000
United States Potters Association (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	1,100
Carrier Corp. (Syracuse, NY)	Machinery	Sheet Metal Workers	2,150
Dresser Industries (Illinois)	Machinery	Auto Workers	1,000
Hughes Aircraft Co. (Los Angeles, CA)	Electrical products	Carpenters	12,000
Bendix Autolite Corp. (Fostoria, OH)	Electrical products	Auto Workers	1,350
United Technologies Corp., Pratt & Whitney Division (Connecticut)	Transportation equipment	Machinists	16,000
Armstrong Cork Co., floor plant (Lancaster, PA)	Miscellaneous manufacturing	Rubber Workers	1,700
Central States area tank truck agreement (Interstate)	Trucking	Teamsters (Ind.)	4,000
General Telephone Co. of Illinois (Illinois)	Communication	Electrical Workers (IBEW)	2,250
Michigan Consolidated Gas Co. (Michigan)	Utilities	Service Employees	1,300
Chain and independent food stores, grocery (Milwaukee, WI)	Retail trade	Food and Commercial Workers	3,500
Milwaukee area retail meat industry (Milwaukee, WI)	Retail trade	Food and Commercial Workers	1,000
Food Employers Council Inc. (Southern California)	Retail trade	Food and Commercial Workers	10,000
Greater Boston Hotel and Motor Inn Association (Boston, MA)	Hotels	Hotel Employees and Restaurant Employees	3,000
Associated Press (Interstate)	Services	Wire Service Guild	1,100
Film Exchange agreement (Interstate)	Amusements	Theatrical Stage Employees	1,500
Hawaii area hospitals (Hawaii)	Hospitals	Nurses Association (Ind.)	1,500

[1]Affiliated with AFL–CIO except where noted as independent (Ind.).

Developments in Industrial Relations



Western Union gains concessions

Financially troubled Western Union Corp. gained some labor cost relief in a settlement with the United Telegraph Workers that ended a 10-day strike. Bargaining continued with the Communications Workers union for 600 workers in the New York City area who continued their stoppage.

In announcing the 2-year accord, UTW President Richard Brockert said, "What we are doing is turning a very generous contract into a very good contract. We preserved as much as we could, yet we gave the company flexibility."

Company Chairman Robert S. Leventhal, who has indicated that he wants to eliminate about 2,000 of the 7,100 jobs in the two bargaining units, said, "Tough decisions had to be made, and both parties had to face up to them." The company, which had already eliminated 1,500 nonunion jobs since December 1984, lost $63.3 million in 1984 and $25 million in the first half of 1985.

The UTW members will receive a 3-percent wage increase in the second contract year. In lieu of a first-year wage increase, they will be eligible for possible profit-sharing distributions after the close of calendar years 1986 and 1987. The possible distributions, in the form of deferred stock, would be financed by Western Union obligations equal to 8 percent of the first $50 million of company profits in each year, 10 percent of the next $50 million, and 12 percent of any profit above $100 million.

Other provisions included:

- Elimination of a "comparable job" clause which guaranteed that any worker with at least 5 years of service would remain on the payroll for a period equal to his or her tenure if the job was eliminated and a comparable job was not available.
- For the 1,000 workers on a 35-hour workweek, a 2-step conversion to a 40-hour schedule, with no increase in pay.
- Permission for Western Union to hire part-time workers at $6 an hour with no benefits. These employees will be restricted to the company's three telephone bureaus and their total hours will be restricted to 25 percent of all hours worked at the bureaus.
- Elimination of some job classifications, with provisions for job retraining for affected employees.
- A maximum of 20 weeks of severance pay for new employees or current employees with less than 20 weeks accrual of benefit credits who are terminated. Longer service employees already eligible for more than 20 weeks of pay will be frozen at their current accrual level. Previously, terminated workers were eligible for 20 weeks of pay after 10.5 years of service, 54 weeks after 20 years, and an additional 4 weeks for every year of service in excess of 20.

In December 1984, the company and the unions had agreed to a 10-percent pay cut to last for 6 months. After restoration of the cut on July 27, annual earnings reportedly averaged about $20,000.

GM–Auto Workers Saturn contract

In a development that could influence labor-management relations elsewhere in the automobile manufacturing industry—and possibly in other industries—General Motors Corp. (GM) and the United Auto Workers (UAW) agreed on an innovative contract for the company's new Saturn automobile subsidiary. The possibility that the innovations in the Saturn agreement will be extended to other settlements was downplayed by GM and the UAW, which described the Saturn accord as a "special case" all-out attempt to overcome the cost advantages of Japanese and other foreign small car producers. This position was embodied in a letter from the union to GM stating that the agreement does not set "a precedent at any other facility, including those at General Motors."

The Saturn accord, expected to cover 6,000 workers when the planned Tennessee plant begins production in 1989, does not have a set expiration date. Instead, the parties view it as a "living document," permitting them to negotiate additions, changes, and deletions at any time. If either party is unable to obtain desired modifications in this manner, the party is permitted to initiate "formal" negotiations and to initiate a strike or lockout if a settlement is not attained within 30 days.

The operating and skilled technicians comprising the bargaining unit will be drawn primarily from active and laid-off workers represented by the union at other GM plants.

"Developments in Industrial Relations" is prepared by George Ruben of the Division of Developments in Labor-Management Relations, Bureau of Labor Statistics, and is largely based on information from secondary sources.

They will not lose any other benefits if they do not apply for the jobs at the Spring Hill facility. To the extent permitted by law, employees will be encouraged to join the union. (Tennessee is a "Right to Work State," meaning that employees cannot be required to join a union as a condition of employment.)

Based on their belief that "people are the most valuable asset of the organization," all UAW–GM members initially hired by Saturn will enjoy permanent job security. Thereafter, new employees will gain such protection, depending on seniority, and at least 80 percent of the work force will be covered at all times. Employees will not lose their protected status because of fluctuations in the work force and the unprotected employees will be subject to layoff only because of "catastrophic" conditions. Further, the union will have a say in determining if a condition is indeed catastrophic because it will be "a full partner" in all decisionmaking, meaning that "no decision can be reached without its approval," according to UAW President Owen Bieber.

In line with this principle, the accord establishes a work structure comprising "Work Unit Members" (individual employees), Work Units (integrated groups of about 6 to 15 members), several intermediate joint bodies, and, at the top, a Strategic Advisory Committee responsible for long-range planning and dealing with outside parties such as suppliers, stockholders, and communities.

Despite these mechanisms to obtain mutual agreement to particular policies or actions, either party "may block a potential decision." In recognition of such possible difficulties, the agreement provides for retention of the traditional grievance procedure, which culminates in binding arbitration of unresolved issues.

In another major deviation from usual practice, members' base pay will be established on an annual basis and they will be paid semi-monthly. During the period from the effective date of the agreement to 1 year following the production of the first for-sale vehicle, annual salaries will be calculated at $13.45 an hour for operating technicians and $15.49 for skilled technicians. In addition, during this "bridging" period they will receive quarterly payments reflecting compensation changes of UAW-represented workers at GM plants, such as automatic cost-of-living pay adjustments (COLA), negotiated wage changes, profit sharing, and performance and attendance bonuses.

During the following year, annual salaries will be calculated according to an hourly rate equal to 80 percent of the average at domestic plants of GM, Ford Motor Co., Chrysler Corp., Mazda Motor Corp., and New United Motor Manufacturing, Inc. The resulting salaries, which will be subject to periodic adjustment by the Strategic Advisory Committee, will be supplemented by possible payments under a reward system designed to assure pay equal to comparable employees of GM. Performance above or below the requirements of the reward system will result in greater or lesser pay than comparable GM employees. The reward system will include factors such as performance to individual and group objectives, specific productivity targets, and profits available for distribution to members under a Saturn Sharing Formula.

In another departure from the practice at GM plants, there will be only one job classification for production workers and three to five for skilled workers. GM workers—and those at Ford, Chrysler, and American Motors Corp.—are divided into numerous classifications, which management generally views as detrimental to productivity.

In addition to attempting to unify the manufacturing and office workers at the plant by having all workers on a salary basis and giving them a voice in operations, the parties also eliminated time clocks and separate parking lots and cafeterias for the two types of workers. There also was a provision for introducing rotating, rather than fixed, shifts for all workers in the bargaining unit.

Other terms include—

- Holiday and vacation entitlements matching those at GM, with transferring employees receiving vacations calculated on combined GM-Saturn service.
- A defined contribution-individual account type of retirement plan. GM employees with at least 10 years of service transferring to Saturn will receive combined benefits, with one portion calculated on their years of service under GM's defined benefit plan and the other portion calculated according to their years under the Saturn plan.
- Establishment of individual savings plans under which members can contribute up to 15 percent of base pay. Saturn will match the member's contribution up to 6 percent of base pay at a rate of $1 for every $2 contributed by the member.
- Sickness and accident benefits beginning the first day after the disability occurs. Full base pay will be paid for the first 30 days of the disability, 80 percent for the next 30 days and 60 percent for the balance of the year following the disability.
- Extended disability benefits at a 60-percent rate for a period equal to combined GM and Saturn service for Saturn members with combined length of service of less than 10 years. Those with 10 or more years of combined service will be eligible for a 60-percent benefit until they reach eligibility for unreduced social security benefits.
- Saturn-financed life insurance equal to two times base annual pay, with employees given the option of purchasing additional coverage up to five times base pay, as well as purchasing $10,000 coverage of their spouse and $5,000 coverage of each dependent child.
- Hospital–medical–surgical insurance coverage similar to provisions in the current GM–UAW agreement.

One of the first reactions in the auto industry to the Saturn accord came from Chrysler Chairman Lee A. Iacocca. Speaking on the eve of bargaining with the UAW, he said

Chrysler should get "no less" than the terms of the Saturn agreement. Chrysler's 1983 agreement with the union is scheduled to expire on October 14, 1985. GM and Ford's 1984 agreements are scheduled to expire on September 14, 1987. American Motors' 1985 agreement is scheduled to expire in 1988. (See *Monthly Labor Review*, September 1985, pp. 51–52.)

Airline update

A 3-month strike against Alaska Airlines ended when members of the Machinists union approved a contract proposal that included a two-tier pay system and productivity improvements, including more flexible work rules and greater use of part-time employees. The contract also included an open-shop provision, which means that workers in the bargaining unit need not be members of the union.

Four unions agreed to purchase Frontier Airlines using savings resulting from wage concessions negotiated with the carrier. The $210.8 million buyout price was subject to approval by Frontier's board of directors. The four unions are the Air Line Employees Association, the Air Line Pilots Association, the Association of Flight Attendants, and the Transport Workers. A fifth union, the Machinists, apparently will not participate in the buyout.

Northwest Airlines and the Machinists agreed to a 40-month contract that includes a two-tier pay structure. Under the provision, new hires will be paid 21 to 50 percent less than the 4,500 current employees. After 5 years of service, the new workers will move up to the higher pay scale. The contract also provides for a pay increase totaling 10.1 percent over the term. After the final increase on July 1, 1987, maximum rates will be $18.50 for mechanics and $16.80 for equipment service workers.

USAir and the Association of Flight Attendants negotiated a 2-year contract that includes a two-tier pay provision. Under the provision, attendants hired after August 13 will receive an average of 22 percent less pay than those already on the payroll. After completing 6 years of service, the new hires will move up to the same pay level as other employees. The 2,200 current employees will receive a 4.04-percent wage increase over the 2-year term of the contract, which was retroactive to September 1, 1984.

American Airlines and the Allied Pilots Association amended their 1983 agreement to narrow the pay gap between new and veteran employees. The parties also agreed to pay increases to bring American pilots up to the pay level of the company's major competitors. The carrier did not reveal details of the contract amendments, which were negotiated under a reopening provision, but a union official said that although all of the 4,500 employees received pay increases, those with low seniority received the largest increase. In a change beneficial to American, the pilots agreed to fly overtime in certain months, if necessary to maintain full flight schedules. Previously, the pilots could not be assigned to fly more than 75 hours a month, which had forced American Airlines to cut back scheduled flights twice in the last year.

Auto transporters end 19-day strike

A 19-day strike that had begun to cut automobile sales ended when the Teamsters union settled with the National Automobile Transporters Association, comprising 36 companies that deliver new cars to dealers. In the wake of the stoppage, the major domestic auto manufacturers offered inducements to the public to reduce their larger-than-usual inventory of vehicles at the end of the model year.

The 3-year contract provides for a limited two-tier pay system for terminal employees under which new employees will be paid 80 percent of the standard rate for their job during their first year, 90 percent during the second year, and the full rate thereafter. Under an earlier proposal the workers had rejected, the two-tier system would also have applied to drivers.

Another provision gives employees the right to vote on whether their particular employers should be permitted to cut rates by 50 percent on "back-hauls"—instances in which drivers deliver a load of vehicles to a destination and are able to obtain a load of vehicles for the return. Under the prior contract, some employers had been able to obtain permission for reduced back-haul rates based on their financial condition. Under the rejected proposal, reduced rates would have applied to all back-hauls.

The accord provides for a 60-cent-an-hour wage increase in each contract year for terminal employees and for drivers during "nondriving" periods, such as when their vehicles are being loaded or unloaded. The driving rate was increased by 3.5 cents per mile in each year.

Other terms included continuation of the provision for automatic annual cost-of-living adjustments, with no diversions but payable only to the extent that the calculated amount exceeds 70 cents each year. (The employees did not receive any adjustments under the October 1984 agreement, which provided for possible adjustments in September of 1985 and 1986, each payable only to the extent that the calculated amounts exceeded 50 cents and also subject to diversions to maintain benefit levels.) The agreement also permits drivers from other terminals to haul away up to 20 percent of the loads from terminals to which they have made deliveries.

Work changes cut costs in movie-TV industry

More than 30,000 film and television workers were covered by a settlement between the Alliance of Motion Picture and Television Producers and seven unions. The unions reportly agreed to some cost-cutting changes in work rules intended to keep as much production work as possible in Southern California. In recent years, an increasing number of films have been produced elsewhere, apparently because of lower costs.

Other provisions included a $3 an hour wage increase over the 3-year term; pension increases of 25 percent for future retirees and 10 percent for current retirees; an increase in the employers' payment into pension and health and welfare funds from the sale of videocassettes; and a $3.5 million special employer payment into the funds to settle the unions' claim of past underpayments.

The unions involved were 24 locals of the Stage Employees (representing 24,000 of the workers) and locals of the Electrical Workers (IBEW), Laborers, Plasterers, Plumbers and Pipe Fitters, Hotel Employees and Restaurant Employees, and the Teamsters.

U.S. Steel to eliminate 100 jobs

In McKeesport, PA, members of United Steelworkers Local 1408 agreed to the elimination of 100 jobs at U.S. Steel Corp's National Works to prevent closing of the facility, which produces welded pipe. The settlement also includes a $400 a month pension supplement to ease the impact on the workers by inducing some to retire early.

The parties also agreed to reduce labor costs by essentially combining maintenance and equipment operator job categories, following the lead of the company's other pipe plants in Ohio, Texas, and Alabama.

After the employment cut, the plant will employ 250 members of the union, compared with 4,200 in 1982 and an earlier peak of 5,000.

PEPCO's first strike

The first strike against the Potomac Electric Power Co. in its 89-year history ended when members of Local 1900 of the International Brotherhood of Electrical Workers (IBEW) ratified a contract. The accord covered 3,300 workers in Washington, DC, and parts of nearby Maryland and Virginia. The utility operated during the stoppage, utilizing some 1,800 supervisors and administrators as replacements.

Wages were increased by 5 percent retroactive to June 2, 1985, and by 4.5 percent in June of 1986 and 1987.

Benefits changes provided by the 3-year contract included a 38-percent increase in pensions for workers retiring at age 55 after 30 years of service, and a 23-percent increase for those retiring at age 60; additional pension increases resulting from crediting all service from age 21 (formerly 25); hospital medical and surgical insurance cost containment features such as pre-authorization reviews for elective surgery and higher fee schedules for out-patient surgery to reduce hospital use, and an increase in deductibles to $100 per person and $300 per family, from $50 and $100; a 10th annual paid holiday; elimination of the cap on accumulation of sick leave, which ranged from 10 to 25 days, varying by length of service; and establishment of a savings plan, with the only investment being made by the employees, up to 10 percent of their earnings.

Electrical workers in Pennsylvania settle

Pennsylvania Power and Light Co. and the International Brotherhood of Electrical Workers settled for 5,300 workers. Wages were increased by 4.75 percent effective immediately and 4.5 percent in the second and third years, with the third-year increase subject to renegotiation if the Consumer Price Index rises by more than 6 percent over the March 1986–March 1987 period.

Other changes include second surgical opinions and other requirements intended to contain health care cost increases; a cut in the allowance for employees using personal vehicles for business, to 20.5 cents a mile, from 21 cents; a 3-cent-an-hour increase in shift differentials in each year; and changes in the pension plan to conform with new Federal laws.

Diamond Walnut cuts hourly pay rates

In Stockton, CA, 3 months of intense negotiations between Diamond Walnut Growers Inc. and Local 601 of the Cannery Workers resulted in a settlement that cut hourly pay rates by as much as 43 percent. The new rates range from $5.25 to $12 for nonseasonal workers, compared with the former $8.43 to $14.08; and $4 to $11 for seasonal workers, compared with the old scale of $7 to $14. Medical and dental benefits also were terminated for part-time and seasonal workers and all other workers will be required to pay a higher percentage of their medical care premiums.

Officials of the producer's cooperative had contended that the concessions were necessary to bring operating costs into line with smaller independent processors. In February, the cooperative opened a plant in Tijuana, Mexico, that led to a cut of 100 jobs at the Stockton plant. At the Tijuana plant, most workers reportedly earn the equivalent of $1.10 to $2.50 an hour.

Terms favorable to the workers included a one-time bonus of $2,000–$11,000, varying by seniority, and a guarantee that the number of workers receiving "full-time" benefits will not drop below 300.

The Cannery Workers union is an affiliate of the Teamsters union.

Store accord includes two-tier raises

A provision for two-tier pay increases was included in a settlement between the United Food and Commercial Workers and 47 Bradlees Department Stores in Massachusetts, New Hampshire, and Maine. Under the provision, the 3,400 current employees will receive wage increases totaling $1.25 an hour over the 3-year contract term, while those hired after the effective date of the contract will receive increases totaling 70 cents. According to the union, average pay was $4.23 an hour prior to the settlement. All of the employees are in one job classification, clerk/cashier.

The accord also provides for a pension rate of $12 a month (formerly $10) for each year of service and for a possible

reopening of negotiations for all 47 stores if Massachusetts enacts an increase in the State's minimum wage.

Registered nurses in California get pay increases

In California, a threatened strike was averted when the Affiliated Hospitals of San Francisco settled with 2,000 registered nurses represented by the California Nurses Association. The nurses will receive 4-percent pay increases in the first and second years. They agreed to a small increase—3.5 percent—in the third and final year, in return for retention of percentage pay premiums for nurses who work standby or short shifts.

BART to hire more part-timers

The California Bay Area Rapid Transit gained the right to hire more part-time workers over the next 6 years under a settlement with two unions representing 1,700 employees. A management official said that the change—which was reluctantly accepted by operating employees represented by the Amalgamated Transit Union—will give the agency operating flexibility when new trains are put into service late in 1987.

Under the 3-year contract, hourly wage rates were increased by 4 percent in each year, bringing the range to $10.76–$14.69 for station agents and operators, $14.69 for maintenance workers, and $11.55–$13.62 for secretaries.

The 1,200 maintenance and clerical workers are represented by the United Public Employees Union.

New York State, city employees settle

There were several settlements in New York State involving large units of workers. More than 100,000 clerical, administrative, institutional, and blue-collar employees, represented by the Civil Service Employees Association, settled with the State on a 3-year contract. The contract provided for wage increases of 5 percent in June 1985, 5.5 percent in April 1986, and 6 percent in April 1987; $600 a year "location pay" for workers in areas with high living costs; freezing of entry level pay rates for new employees; and revisions in health insurance, including State determination of the payment schedule for various medical and surgical procedures.

The City of New York settled with various unions for 125,000 workers. The 3-year contract for 80,000 nonuniformed employees provided for pay increases of 5 percent retroactive to the July 1, 1984, termination date of the prior agreement, 5 percent on July 1, 1985, and 6 percent on July 1, 1986; a $500 longevity increase in annual pay for employees with at least 15 years of service; a twelfth annual holiday (Dr. Martin Luther King Jr.'s birthday); a $150 increase (to $675) in the City's annual payment for vision and dental care benefits; and a cut in paid vacations for workers hired after July 1, 1985.

New York City's 3-year accord for 45,000 uniformed employees provided for 6-percent pay increases on July 1 of 1984, 1985, and 1986. Other terms were similar to those for the nonuniformed workers.

In another settlement in New York City, the Transport Workers and the Metropolitan Transit Authority agreed on a 5-percent pay increase retroactive to April 1, 1985, and 6-percent increases on April 1 of 1986 and 1987. The 3-year agreement, covering 36,000 employees, also called for some worker concessions, including the freezing of weekend and night pay differentials, changes in overtime pay rules, and a lengthening of the pay progression schedule for new employees. Under the new approach, workers will start at 70 percent of the full wage rate and move to the top after 36 months' service. Previously, workers started at 75 percent of the top rate and worked up to the top rate after 31 to 48 months, varying by job.

The Authority agreed to infuse $42.7 million into the health and welfare plan to maintain benefit levels, and to pay $12.2 million toward improving benefits and adding dental, vision, and prescription drug coverage.

The same wage and benefit terms were accepted by the Amalgamated Transit Union for 2,000 bus drivers and mechanics it represents in Queens and Staten Island.

New York hotel workers end strike

The Hotel Association of New York, Inc., and the nine-union Hotel and Motel Council agreed on a 5-year contract, ending the first strike in the local industry in nearly 50 years. The 26-day stoppage involved 16,000 employees of the 53 hotels in the association. The hotels remained open during the stoppage, utilizing management employees and 5,000 hired replacements. The settlement also applied to 9,000 employees of more than 100 independent hotels, which were not struck.

Wages were increased by 6.5 percent effective immediately, 6 percent in August 1986, and 5.5 percent in November 1987 and January 1989. The increases will be calculated on presettlement average pay, including premiums for merit, rather than being compounded. Previously, average pay was about $315 a week, including about $20 in premiums.

During their first year on the job, new employees will be paid 75 percent of the top rate for their job. Previously, the lower rate applied to the first month of employment.

Other provisions included an increase in the maximum monthly pension to $300, from $262.50; establishment of an employer-financed college scholarship fund of $300,000 a year; a twelfth paid holiday; rehabilitation programs for drug and alcohol abusers; nursery care for newborn children; and adoption of a legal services plan.

Management said it expected cost savings from a new provision allowing workers to perform the duties of another job if not fully occupied by their regular duties. The workers will receive the higher of the two job rates and, in some cases, they will also receive an additional $10 a week.

Depository Trust workers settle

In the securities industry, the Depository Trust Co. and the Office and Professional Employees union settled on a 3-year contract, ending a 14-day strike by 1,400 clerical workers. The New York City company, which is cooperatively owned by the industry, processes securities transactions. The company contended that it operated "as well or better than usual during the strike," using managers and trained volunteers.

Settlement terms included 5-percent salary increases at the beginning of each contract year, and improvements in medical benefits. Prior to the settlement, average pay was $376 a week, according to the union.

Auto Workers contract eliminates two-tier pay

In Texas, Local 848 of the Auto Workers negotiated a 3-year contract with the Vought Aero Products Division of LTV Corp. that revoked or reversed provisions the company had unilaterally instituted 15 months earlier when the prior contract had expired and the parties had reached a bargaining impasse.

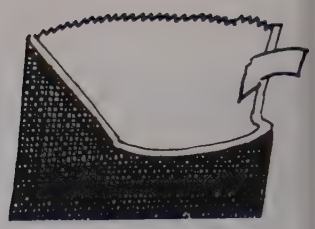
From the union's point of view, the feature of the settlement was elimination of a two-tier pay system the company had instituted, under which new workers were to have been permanently paid less than those already on the payroll. Under the settlement, new workers will attain the same maximum rates as incumbents, although it will be accomplished over a period of about 15 years.

Other terms included restoration of a provision for automatic cost-of-living pay adjustments management had terminated; restoration of cuts in insurance benefits; improvements in pensions and other benefits; reinstatement with back pay of 65 union members the company had fired; lump-sum payments at the beginning of the first and second contract years each equal to 2 percent of employee earnings during the preceding 12 months; and a 3-percent pay increase at the beginning of the third year.

The settlement, which covered 3,600 workers was preceded by a 4-hour strike, the first full-scale work stoppage at the division in its 34 years in the Dallas area. □

A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.



Book Reviews

A guide to mediation

Public Sector Mediation. By Arnold M. Zack. Washington. The Bureau of National Affairs, Inc., 1984. 199 pp. $20.

Arnold Zack, a well-known arbitrator, turns his attention to public sector mediation in this slim, 200-page volume. He says the volume is "largely a reflection of my own experience as an independent mediator." Aimed at "those who are newly thrust into the mediation arena," Zack's book will assist them in understanding and anticipating the process.

The volume's initial three chapters introduce the reader to the basics of and the need for mediation, and list the necessary qualifications for mediators. Chapters dealing with preparation for mediation, the first session, separate meetings with the parties involved, and issue handling constitute the core of the book. Several chapters focus on the settlement itself and on the mediator and his or her problems. Career opportunities for mediators are also discussed. The Code of Professional Conduct for Labor Mediators, promulgated by the Federal Mediation and Conciliation Service, is available in the appendix.

Public sector issues and controversies are frequently cited, but Zack discusses mediation in both the private and public sectors. Thus, the author has presented beginning readers with a well-written guide to the mediation process. In fact, mediators who practice exclusively in the private sector will be surprised to learn that in both sectors the process is quite similar.

Zack is at his best in describing how he handles problems that arise. His suggested solution is quite simple. When the parties meet with Zack with hundreds of unresolved issues, he points out that airing all the controversies will take weeks, perhaps months. He requests the parties to reduce the number of unresolved issues to a manageable number, and awaits their return. There are often two possible approaches to a particular problem, and Zack presents the alternatives and arguments for each. The mediation agenda is a good example. Some mediators prefer to begin with little issues, believing that resolving some differences will be easily achieved and result in other agreements. Conversely, other mediators stress the importance of dealing with a key issue before there will be general agreement by the parties.

This reviewer was particularly impressed with Zack's analysis of the two negotiating teams and their "typical" attitudes. In many ways, his discussion resembles traditional collective bargaining literature. Just as the parties try to assess "opportunities" for settlement and attempt to convert some of their counterparts, the mediator tries to identify allies in both camps who would champion settlements. The mediator's task is of course simpler because he wants to achieve a settlement rather than gain a particular advantage. Equally intriguing was the discussion on meetings with the delegation's spokespersons. Although they rarely control the delegation, a mediator "may be able to utilize the spokesperson to accelerate the process and to prevent false starts and tactical errors." Particularly useful was the suggestion that some individuals might become the "mediator's mediator."

Readers may find some gaps in this book. I suspect that many will be disappointed that the author has not discussed the mediator's role during a strike. While stoppages are legal in only a few jurisdictions, they occur even in units in which they are illegal. A discussion of the mediator's role would certainly aid those newly exposed to mediation. This reviewer was disappointed that Zack did not discuss a problem in negotiation which has often plagued the public sector. In some jurisdictions, the absence of a strike deadline has resulted in a lack of pressure to force settlements. As a result, negotiations tend to "drag on," and mediators need to find some way to encourage settlements.

A volume aimed at neophytes cannot touch on all problems. The uninitiated, however, will certainly learn a good deal from the volume. More sophisticated readers may also benefit if they read selectively about the difficulties that face them.

—Joseph Krislov
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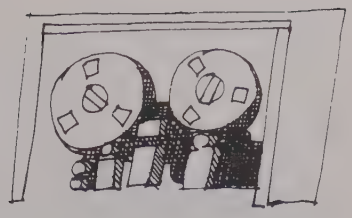
Current Labor Statistics



Notes on Current Labor Statistics 58

Schedule of release dates for major BLS statistical series 58

Employment data from household survey. Definitions and notes 59
1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–84 59
2. Employment status of the population, including Armed Forces in the United States, by sex, seasonally adjusted 60
3. Employment status of the civilian population, by sex, age, race, and Hispanic origin, seasonally adjusted 61
4. Selected employment indicators, seasonally adjusted 62
5. Selected unemployment indicators, seasonally adjusted 63
6. Unemployment rates, by sex and age, seasonally adjusted 64
7. Unemployed persons, by reason for unemployment, seasonally adjusted 64
8. Duration of unemployment, seasonally adjusted 64

Employment, hours, and earnings data from establishment surveys. Definitions and notes 65
9. Employment, by industry, selected years, 1950–84 66
10. Employment, by State 66
11. Employment, by industry, seasonally adjusted 67
12. Average hours and earnings, by industry, 1968–84 68
13. Average weekly hours, by industry, seasonally adjusted 69
14. Average hourly earnings, by industry 70
15. Hourly Earnings Index, by industry 70
16. Average weekly earnings, by industry 71
17. Indexes of diffusion: industries in which employment increased, seasonally adjusted 71

Unemployment insurance data. Definitions 72
18. Unemployment insurance and employment service operations 72

Price data. Definitions and notes 73
19. Consumer Price Index, 1967–84 74
20. Consumer Price Index, U.S. city average, general summary and selected items 74
21. Consumer Price Index, cross-classification of region and population size class 80
22. Consumer Price Index, selected areas 81
23. Producer Price Indexes, by stage of processing 82
24. Producer Price Indexes, by commodity groupings 83
25. Producer Price Indexes, by special commodity groupings 85
26. Producer Price Indexes, by durability of product 85
27. Producer Price Indexes for the output of selected SIC industries 85

Productivity data. Definitions and notes 86
28. Annual indexes of multifactor productivity and related measures, selected years, 1950–83 87
29. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–84 87
30. Annual changes in productivity, hourly compensation, unit costs, and prices, 1974–84 88
31. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted 88
32. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices 89

Wage and compensation data. Definitions and notes 90
33. Employment Cost Index, by occupation and industry group 91
34. Employment Cost Index, wages and salaries, by occupation and industry group 92
35. Employment Cost Index, private nonfarm workers, by bargaining status, region, and area size 93
36. Wage and compensation change, major collective bargaining settlements, 1980 to date 94
37. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1980 to date 94

Work stoppage data. Definition 95
38. Work stoppages involving 1,000 workers or more, 1947 to date 95

NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. A brief introduction to each group of tables provides definitions, notes on the data, sources, and other material usually found in footnotes.

Readers who need additional information are invited to consult the BLS regional offices listed on the inside front cover of this issue of the *Review*. Some general notes applicable to several series are given below.

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "seasonally adjusted." Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted labor force data in tables 3–8 were revised in the February 1985 issue of the *Review*, to reflect experience through 1984.

Beginning in January 1980, the BLS introduced two major modifications in the seasonal adjustment methodology for labor force data. First, the data are being seasonally adjusted with a new procedure called X–11/ ARIMA, which was developed at Statistics Canada as an extension of the standard X–11 method. A detailed description of the procedure appears in *The X–11 ARIMA Seasonal Adjustment Method* by Estela Bee Dagum (Statistics Canada Catalogue No. 12–564E, January 1983). The second change is that seasonal factors are now being calculated for use during the first 6 months of the year, rather than for the entire year, and then are calculated at mid-year for the July–December period. Revisions of historical data continue to be made only at the end of each calendar year.

Annual revision of the seasonally adjusted payroll data shown in tables 11, 13, 15, and 17 were made in July 1985 using the X–11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 29 and 30 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is $2 ($3/150 × 100 = $2). The resulting values are described as "real," "constant," or "1967" dollars.

Availability of information. Data that supplement the tables in this section are published by the Bureau of Labor Statistics in a variety of sources. Press releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule given below. More information from household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau. Comparable household information is published in a two-volume data book—*Labor Force Statistics Derived From the Current Population Survey*, Bulletin 2096. Comparable establishment information appears in two data books—*Employment, Hours, and Earnings, United States*, and *Employment, Hours, and Earnings, States and Areas*, and their annual supplements. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*.

Symbols

p = preliminary. To improve the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.

r = revised. Generally, this revision reflects the availability of later data but may also reflect other adjustments.

n.e.c. = not elsewhere classified.

Schedule of release dates for BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	October 4	September	November 1	October	December 6	November	1–11
Producer Price Index	October 11	September	November 15	October	December 13	November	23–27
Consumer Price Index	October 23	September	November 22	October	December 20	November	19–22
Real earnings	October 23	September	November 22	October	December 20	November	12–16
Productivity and costs:							
Nonfarm business and manufacturing	October 28	3rd quarter	.....	.....	.....	.....	29–32
Nonfinancial corporations	.....	.....	.....	.....	December 2	3rd quarter	29–32
Major collective bargaining settlements	October 28	1st 9 months	.....	.....	.....	.....	36–37
Employment Cost Index	October 29	3rd quarter	.....	.....	.....	.....	33–35
Occupational injuries and illnesses	.....	.....	November 13	1984	.....	.....	.....

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 59,500 households selected to represent the U.S population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all civilians who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. Members of the Armed Forces stationed in the United States are also included in the employed total. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **overall unemployment rate** represents the number unemployed as a percent of the labor force, including the resident Armed Forces. The **unemployment rate** for all civilian workers represents the number unemployed as a percent of the civilian labor force.

The **labor force** consists of all employed or unemployed civilians plus members of the Armed Forces stationed in the United States. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons who are retired, those engaged in their own housework, those not working while attending school, those unable to work because of long-term illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy, and members of the Armed Forces stationed in the United States. The **labor force participation rate** is the proportion of the noninstitutional population that is in the labor force. The **employment-population ratio** is total employment (including the resident Armed Forces) as a percent of the noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the preceding years. These adjustments affect the comparability of historical data presented in table 1. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings*.

Data in tables 2–8 are seasonally adjusted, based on the seasonal experience through December 1984.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–84

[Numbers in thousands]

Year	Noninstitutional population	Labor force										Not in labor force
				Employed						Unemployed		
		Number	Percent of population	Total	Percent of population	Resident Armed Forces	Civilian			Number	Percent of labor force	
							Total	Agriculture	Nonagricultural industries			
1950	106,164	63,377	59.7	60,087	56.6	1,169	58,918	7,160	51,758	3,288	5.2	42,787
1955	111,747	67,087	60.0	64,234	57.5	2,064	62,170	6,450	55,722	2,852	4.3	44,660
1960	119,106	71,489	60.0	67,639	56.8	1,861	65,778	5,458	60,318	3,852	5.4	46,617
1965	128,459	76,401	59.5	73,034	56.9	1,946	71,088	4,361	66,726	3,366	4.4	52,058
1966	130,180	77,892	59.8	75,017	57.6	2,122	72,895	3,979	68,915	2,875	3.7	52,288
1967	132,092	79,565	60.2	76,590	58.0	2,218	74,372	3,844	70,527	2,975	3.7	52,527
1968	134,281	80,990	60.3	78,173	58.2	2,253	75,920	3,817	72,103	2,817	3.5	53,291
1969	136,573	82,972	60.8	80,140	58.7	2,238	77,902	3,606	74,296	2,832	3.4	53,602
1970	139,203	84,889	61.0	80,796	58.0	2,118	78,678	3,463	75,215	4,093	4.8	54,315
1971	142,189	86,355	60.7	81,340	57.2	1,973	79,367	3,394	75,972	5,016	5.8	55,834
1972	145,939	88,847	60.9	83,966	57.5	1,813	82,153	3,484	78,669	4,882	5.5	57,091
1973	148,870	91,203	61.3	86,838	58.3	1,774	85,064	3,470	81,594	4,355	4.8	57,667
1974	151,841	93,670	61.7	88,515	58.3	1,721	86,794	3,515	83,279	5,156	5.5	58,171
1975	154,831	95,453	61.6	87,524	56.5	1,678	85,845	3,408	82,438	7,929	8.3	59,377
1976	157,818	97,826	62.0	90,420	57.3	1,668	88,752	3,331	85,421	7,406	7.6	59,991
1977	160,689	100,665	62.6	93,673	58.3	1,656	92,017	3,283	88,734	6,991	6.9	60,025
1978	163,541	103,882	63.5	97,679	59.7	1,631	96,048	3,387	92,661	6,202	6.0	59,659
1979	166,460	106,559	64.0	100,421	60.3	1,597	98,824	3,347	95,477	6,137	5.8	59,900
1980	169,349	108,544	64.1	100,907	59.6	1,604	99,303	3,364	95,938	7,637	7.0	60,806
1981	171,775	110,315	64.2	102,042	59.4	1,645	100,397	3,368	97,030	8,273	7.5	61,460
1982	173,939	111,872	64.3	101,194	58.2	1,668	99,526	3,401	96,125	10,578	9.5	62,067
1983	175,891	113,226	64.4	102,510	58.3	1,676	100,834	3,383	97,450	10,717	9.5	62,665
1984	178,080	115,241	64.7	106,702	59.9	1,697	105,005	3,321	101,685	8,539	7.4	62,839

2. Employment status of the population, including Armed Forces in the United States, by sex, seasonally adjusted

[Numbers in thousands]

Employment status and sex	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
TOTAL															
Noninstitutional population[1,2]	175,891	178,080	178,295	178,483	178,661	178,834	179,004	179,081	179,219	179,368	179,501	179,649	179,798	179,967	180,131
Labor force[2]	113,226	115,241	115,341	115,484	115,721	115,773	116,162	116,572	116,787	117,215	117,073	117,078	116,485	117,018	117,025
Participation rate[3]	64.4	64.7	64.7	64.7	64.8	64.7	64.9	65.1	65.2	65.3	65.2	65.2	64.8	65.0	65.0
Total employed[2]	102,510	106,702	106,860	107,114	107,354	107,631	107,971	108,088	108,388	108,820	108,647	108,665	108,072	108,566	108,898
Employment-population rate[4]	58.3	59.9	59.9	60.0	60.1	60.2	60.3	60.4	60.5	60.7	60.5	60.5	60.1	60.3	60.5
Resident Armed Forces[1]	1,676	1,697	1,712	1,720	1,705	1,699	1,698	1,697	1,703	1,701	1,702	1,705	1,702	1,704	1,726
Civilian employed	100,834	105,005	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945	106,960	106,370	106,862	107,172
Agriculture	3,383	3,321	3,264	3,319	3,169	3,334	3,385	3,320	3,340	3,362	3,428	3,312	3,138	3,126	3,092
Nonagricultural industries	97,450	101,685	101,884	102,075	102,480	102,598	102,888	103,071	103,345	103,757	103,517	103,648	103,232	103,737	104,080
Unemployed	10,717	8,539	8,481	8,370	8,367	8,142	8,191	8,484	8,399	8,396	8,426	8,413	8,413	8,451	8,127
Unemployment rate[5]	9.5	7.4	7.4	7.2	7.2	7.0	7.1	7.3	7.2	7.2	7.2	7.2	7.2	7.2	6.9
Not in labor force	62,665	62,839	62,954	62,999	62,940	63,061	62,842	62,509	62,432	62,153	62,428	62,571	63,313	62,949	63,106
Men, 16 years and over															
Noninstitutional population[1,2]	84,064	85,156	85,257	85,352	85,439	85,523	85,607	85,629	85,692	85,764	85,827	85,898	85,970	86,052	86,132
Labor force[2]	64,580	65,386	65,357	65,589	65,558	65,657	65,814	65,822	65,818	65,923	65,986	66,032	65,608	65,900	65,901
Participation rate[3]	76.8	76.8	76.7	76.8	76.7	76.8	76.9	76.9	76.8	76.9	76.9	76.9	76.3	76.6	76.5
Total employed[2]	58,320	60,642	60,766	60,959	61,018	61,155	61,252	61,213	61,226	61,427	61,405	61,553	60,959	61,256	61,507
Employment-population rate[4]	69.4	71.2	71.3	71.4	71.4	71.5	71.6	71.5	71.4	71.6	71.5	71.7	70.9	71.2	71.4
Resident Armed Forces[1]	1,533	1,551	1,563	1,571	1,557	1,552	1,550	1,549	1,554	1,553	1,553	1,556	1,552	1,554	1,574
Civilian employed	56,787	59,091	59,203	59,388	59,461	59,603	59,702	59,664	59,672	59,874	59,852	59,997	59,407	59,702	59,933
Unemployed	6,260	4,744	4,591	4,630	4,540	4,502	4,562	4,609	4,592	4,495	4,582	4,479	4,649	4,644	4,395
Unemployment rate[5]	9.7	7.3	7.0	7.1	6.9	6.9	6.9	7.0	7.0	6.8	6.9	6.8	7.1	7.0	6.7
Women, 16 years and over															
Noninstitutional population[1,2]	91,827	92,924	93,039	93,132	93,222	93,311	93,397	93,452	93,527	93,603	93,674	93,751	93,828	93,915	93,999
Labor force[2]	48,646	49,855	49,984	49,895	50,163	50,116	50,348	50,750	50,970	51,293	51,086	51,047	50,877	51,117	51,123
Participation rate[3]	53.0	53.7	53.7	53.6	53.8	53.7	53.9	54.3	54.5	54.8	54.5	54.4	54.2	54.4	54.4
Total employed[2]	44,190	46,061	46,094	46,155	46,336	46,476	46,719	46,875	47,162	47,392	47,242	47,113	47,113	47,310	47,391
Employment-population rate[4]	48.1	49.6	49.5	49.6	49.7	49.8	50.0	50.2	50.4	50.6	50.4	50.3	50.2	50.4	50.4
Resident Armed Forces[1]	143	146	149	149	148	147	148	148	149	148	149	149	150	150	152
Civilian employed	44,047	45,915	45,945	46,006	46,188	46,329	46,571	46,727	47,013	47,244	47,093	46,964	46,963	47,160	47,239
Unemployed	4,457	3,794	3,890	3,740	3,827	3,640	3,629	3,875	3,807	3,900	3,844	3,934	3,764	3,807	3,732
Unemployment rate[5]	9.2	7.6	7.8	7.5	7.6	7.3	7.2	7.6	7.5	7.6	7.5	7.7	7.4	7.4	7.3

[1] The population and Armed Forces figures are not adjusted for seasonal variation.
[2] Includes members of the Armed Forces stationed in the United States.
[3] Labor force as a percent of the noninstitutional population.
[4] Total employed as a percent of the noninstitutional population.
[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

3. Employment status of the civilian population by sex, age, race, and Hispanic origin, seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
TOTAL															
Civilian noninstitutional population[1]	174,215	176,383	176,583	176,763	176,956	177,135	177,306	177,384	177,516	177,667	177,799	177,944	178,096	178,263	178,405
Civilian labor force	111,550	113,544	113,629	113,764	114,016	114,074	114,464	114,875	115,084	115,514	115,371	115,373	114,783	115,314	115,299
Participation rate	64.0	64.4	64.3	64.4	64.4	64.4	64.6	64.8	64.8	65.0	64.9	64.8	64.5	64.7	64.6
Employed	100,834	105,005	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945	106,960	106,370	106,862	107,172
Employment-population ratio[2]	57.9	59.5	59.5	59.6	59.7	59.8	59.9	60.0	60.1	60.3	60.1	60.1	59.7	59.9	60.1
Unemployed	10,717	8,539	8,481	8,370	8,367	8,142	8,191	8,484	8,399	8,396	8,426	8,413	8,413	8,451	8,127
Unemployment rate	9.6	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.0
Not in labor force	62,665	62,839	62,954	62,999	62,940	63,061	62,842	62,509	62,432	62,153	62,428	62,571	63,313	62,949	63,106
Men, 20 years and over															
Civilian noninstitutional population[1]	74,872	76,219	76,350	76,451	76,565	76,663	76,753	76,760	76,829	76,904	76,988	77,068	77,135	77,243	77,306
Civilian labor force	58,744	59,701	59,771	59,892	59,913	59,994	60,131	60,033	60,061	60,152	60,177	60,214	60,100	60,143	60,227
Participation rate	78 5	78.3	78.3	78.3	78.3	78.3	78.3	78.2	78.2	78.2	78.2	78.1	77.9	77.9	77.9
Employed	53,487	55,769	55,935	56,075	56,182	56,269	56,372	56,234	56,287	56,421	56,370	56,563	56,209	56,376	56,628
Employment-population ratio[2]	71.4	73.2	73.3	73.3	73.4	73.4	73.4	73.3	73.3	73.4	73.2	73.4	72.9	73.0	73.3
Agriculture	2,429	2,418	2,406	2,414	2,334	2,434	2,494	2,417	2,362	2,326	2,390	2,370	2,266	2,231	2,232
Nonagricultural industries	51,058	53,351	53,529	53,661	53,848	53,835	53,878	53,817	53,926	54,095	53,980	54,193	53,944	54,145	54,396
Unemployed	5,257	3,932	3,836	3,817	3,731	3,725	3,759	3,798	3,774	3,731	3,807	3,651	3,891	3,767	3,600
Unemployment rate	8.9	6.6	6.4	6.4	6.2	6.2	6.3	6.3	6.3	6.2	6.3	6.1	6.5	6.3	6.0
Women, 20 years and over															
Civilian noninstitutional population[1]	84,069	85,429	85,581	85,688	85,793	85,897	85,995	86,015	86,086	86,181	86,274	86,380	86,477	86,575	86,652
Civilian labor force	44,636	45,900	46,092	45,950	46,264	46,279	46,463	46,771	46,894	47,193	47,155	47,077	47,180	47,184	47,344
Participation rate	53.1	53.7	53.9	53.6	53 9	53.9	54.0	54.4	54.5	54.8	54.7	54.5	54.6	54.5	54.6
Employed	41,004	42,793	42,878	42,906	43,091	43,252	43,511	43,610	43,768	44,014	43,958	43,846	44,032	44,059	44,152
Employment-population ratio[2]	48.8	50.1	50.1	50.1	50.2	50.4	50.6	50.7	50.8	51.1	51.0	50.8	50.9	50.9	51.0
Agriculture	620	595	573	590	569	580	595	592	614	659	651	597	558	596	571
Nonagricultural industries	40,384	42,198	42,305	42,316	42,522	42,672	42,916	43,018	43,153	43,355	43,307	43,249	43,474	43,463	43,580
Unemployed	3,632	3,107	3,214	3,044	3,173	3,027	2,952	3,161	3,126	3,179	3,197	3,231	3,148	3,125	3,192
Unemployment rate	8.1	6.8	7.0	6.6	6.9	6.5	6.4	6.8	6.7	6.7	6.8	6.9	6.7	6.6	6.7
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	15,274	14,735	14,653	14,624	14,598	14,575	14,557	14,610	14,600	14,582	14,538	14,496	14,483	14,445	14,448
Civilian labor force	8,171	7,943	7,766	7,922	7,839	7,801	7,870	8,072	8,129	8,169	8,039	8,082	7,502	7,986	7,728
Participation rate	53.5	53.9	53.0	54.2	53.7	53.5	54.1	55.2	55.7	56.0	55.3	55.8	51.8	55.3	53.5
Employed	6,342	6,444	6,335	6,413	6,376	6,411	6,390	6,547	6,630	6,684	6,617	6,551	6,128	6,427	6,393
Employment-population ratio[2]	41.5	43.7	43.2	43.9	43.7	44.0	43.9	44.8	45.4	45.8	45.5	45.2	42.3	44.5	44.2
Agriculture	334	309	285	315	266	320	296	311	364	377	387	345	313	298	289
Nonagricultural industries	6,008	6,135	6,050	6,098	6,110	6,091	6,094	6,236	6,266	6,307	6,230	6,206	5,815	6,129	6,104
Unemployed	1,829	1,499	1,431	1,509	1,463	1,390	1,480	1,525	1,499	1,485	1,422	1,531	1,374	1,559	1,335
Unemployment rate	22.4	18.9	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7	18.9	18.3	19.5	17.3
White															
Civilian noninstitutional population[1]	150,805	152,347	152,402	152,471	152,605	152,659	152,734	153,103	153,191	153,296	153,388	153,489	153,597	153,717	153,819
Civilian labor force	97,021	98,492	98,223	98,426	98,631	98,630	99,005	99,496	99,711	100,035	99,805	99,768	99,441	99,735	99,735
Participation rate	64.3	64.6	64.4	64.6	64.6	64.6	64.8	65.0	65.1	65.3	65.1	65.0	64.7	64.9	64.8
Employed	88,893	92,120	91,951	92,177	92,407	92,587	92,884	93,124	93,552	93,785	93,544	93,539	92,990	93,374	93,599
Employment-population ratio[2]	58.9	60.5	60.3	60.5	60.6	60.6	60.8	60.8	61.1	61.2	61.0	60.9	60.5	60.7	60.8
Unemployed	8,128	6,372	6,272	6,249	6,224	6,043	6,121	6,372	6,159	6,250	6,262	6,230	6,451	6,362	6,136
Unemployment rate	8.4	6.5	6.4	6.3	6.3	6.1	6.2	6.4	6.2	6.2	6.3	6.2	6.5	6.4	6.2
Black															
Civilian noninstitutional population[1]	18,925	19,348	19,386	19,416	19,449	19,481	19,513	19,518	19,542	19,569	19,594	19,620	19,646	19,675	19,700
Civilian labor force	11,647	12,033	12,142	12,082	12,208	12,276	12,306	12,315	12,309	12,280	12,403	12,370	12,269	12,347	12,267
Participation rate	61.5	62.2	62.6	62 2	62.8	63.0	63.1	63.1	63.0	62.8	63.3	63.0	62.5	62.8	62.3
Employed	9,375	10,119	10,222	10,260	10,340	10,426	10,462	10,475	10,301	10,412	10,508	10,438	10,551	10,493	10,548
Employment-population ratio[2]	49.5	52.3	52.7	52.8	53.2	53.5	53 6	53.7	52.7	53.2	53.6	53.2	53.7	53.3	53.5
Unemployed	2,272	1,914	1,920	1,822	1,868	1,850	1,844	1,840	2,008	1,869	1,894	1,932	1,718	1,854	1,718
Unemployment rate	19.5	15.9	15.8	15.1	15.3	15.1	15.0	14.9	16.3	15.2	15.3	15.6	14.0	15.0	14.0
Hispanic origin															
Civilian noninstitutional population[1]	10,795	11,164	11,209	11,240	11,270	11,301	11,332	11,363	11,394	11,425	11,457	11,485	11,514	11,544	11,573
Civilian labor force	6,884	7,247	7,299	7,353	7,384	7,394	7,472	7,255	7,330	7,365	7,336	7,330	7,416	7,470	7,547
Participation rate	63.8	64.9	65.1	65.4	65 5	65.4	65.9	63.8	64.3	64.5	64.0	63.8	64.4	64 7	65.2
Employed	5,943	6,469	6,521	6,573	6,574	6,636	6,698	6,487	6,621	6,615	6,577	6,546	6,629	6,634	6,771
Employment-population ratio[2]	55.1	57.9	58.2	58.5	58 3	58.7	59.1	57.1	58.1	57 9	57.4	57.0	57.6	57.5	58.5
Unemployed	940	778	778	780	810	758	774	768	709	750	759	784	787	836	776
Unemployment rate	13.7	10.7	10.7	10.6	11.0	10.3	10.4	10.6	9.7	10.2	10.3	10.7	10.6	11.2	10.3

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

4. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
CHARACTERISTIC															
Civilian employed, 16 years and over	100,834	105,005	105,148	105,394	105,649	105,932	106,273	106,391	106,685	107,119	106,945	106,960	106,370	106,862	107,172
Men	56,787	59,091	59,203	59,388	59,461	59,603	59,702	59,644	59,672	59,874	59,852	59,997	59,407	59,702	59,933
Women	44,047	45,915	45,945	46,006	46,188	46,329	46,571	46,727	47,013	47,244	47,093	46,964	46,963	47,160	47,239
Married men, spouse present	37,967	39,056	39,073	39,071	39,054	39,337	39,443	39,441	39,357	39,531	39,434	39,244	38,897	39,060	39,109
Married women, spouse present	24,603	25,636	25,772	25,715	25,897	25,995	26,122	25,912	26,108	26,195	26,058	25,951	26,130	26,295	26,363
Women who maintain families	5,091	5,465	5,496	5,429	5,378	5,396	5,396	5,584	5,525	5,631	5,622	5,683	5,696	5,624	5,627
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,579	1,555	1,453	1,565	1,511	1,593	1,733	1,596	1,611	1,610	1,705	1,611	1,538	1,461	1,427
Self-employed workers	1,565	1,553	1,562	1,555	1,487	1,555	1,485	1,531	1,503	1,502	1,491	1,507	1,446	1,487	1,448
Unpaid family workers	240	213	209	195	187	204	212	227	242	263	231	196	154	168	174
Nonagricultural industries:															
Wage and salary workers	89,500	93,565	93,680	94,140	94,415	94,442	94,725	95,068	95,348	95,756	95,617	95,772	95,229	95,456	95,716
Government	15,537	15,770	15,758	15,881	15,997	15,785	15,858	15,738	16,009	16,004	15,968	15,905	15,988	15,843	16,080
Private industries	73,963	77,794	77,922	78,259	78,418	78,657	78,867	79,330	79,339	79,752	79,649	79,866	79,242	79,613	79,636
Private households	1,247	1,238	1,199	1,198	1,213	1,228	1,257	1,374	1,304	1,210	1,208	1,259	1,204	1,258	1,320
Other	72,716	76,556	76,723	77,061	77,205	77,429	77,610	77,956	78,035	78,542	78,441	78,607	78,038	78,355	78,316
Self-employed workers	7,575	7,785	7,807	7,752	7,782	7,731	7,786	7,783	7,673	7,809	7,696	7,665	7,694	7,692	7,904
Unpaid family workers	376	335	321	318	314	357	357	343	340	320	304	283	292	264	303
PERSONS AT WORK PART TIME[1]															
All industries:															
Part time for economic reasons	6,266	5,744	5,582	5,690	5,710	5,623	5,814	5,628	5,335	5,664	5,664	5,912	5,533	5,624	5,713
Slack work	2,833	2,430	2,371	2,461	2,514	2,449	2,596	2,431	2,212	2,599	2,580	2,658	2,543	2,404	2,509
Could only find part-time work	3,099	2,948	2,743	2,943	2,879	2,855	2,873	2,848	2,835	2,744	2,755	2,888	2,706	2,752	2,865
Voluntary part time	12,911	13,169	13,210	13,144	13,126	13,142	13,239	13,355	13,647	13,624	13,278	12,905	13,398	13,791	13,697
Nonagricultural industries:															
Part time for economic reasons	5,997	5,512	5,384	5,449	5,483	5,413	5,596	5,389	5,077	5,400	5,374	5,617	5,257	5,350	5,443
Slack work	2,684	2,291	2,254	2,306	2,364	2,319	2,473	2,287	2,040	2,405	2,390	2,457	2,341	2,242	2,353
Could only find part-time work	2,993	2,866	2,675	2,847	2,821	2,782	2,793	2,749	2,751	2,649	2,668	2,803	2,646	2,668	2,766
Voluntary part time	12,417	12,704	12,747	12,669	12,679	12,670	12,778	12,861	13,157	13,137	12,834	12,483	12,970	13,343	13,266

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

5. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
CHARACTERISTIC															
Total, all civilian workers	9.6	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.0
Both sexes, 16 to 19 years	22.4	18.9	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7	18.9	18.3	19.5	17.3
Men, 20 years and over	8.9	6.6	6.4	6.4	6.2	6.2	6.3	6.3	6.3	6.2	6.3	6.1	6.5	6.3	6.0
Women, 20 years and over	8.1	6.8	7.0	6.6	6.9	6.5	6.4	6.8	6.7	6.7	6.8	6.9	6.7	6.6	6.7
White, total	8.4	6.5	6.4	6.3	6.3	6.1	6.2	6.4	6.2	6.2	6.3	6.2	6.5	6.4	6.2
Both sexes, 16 to 19 years	19.3	16.0	16.0	16.3	15.9	15.1	15.9	15.8	15.2	15.1	14.9	16.1	15.9	16.3	15.3
Men, 16 to 19 years	20.2	16.8	16.7	17.0	16.6	16.2	16.2	15.9	17.0	15.2	15.3	16.8	16.7	17.5	17.6
Women, 16 to 19 years	18.3	15.2	15.4	15.5	15.2	13.9	15.5	15.8	13.4	14.9	14.3	15.3	15.1	15.0	12.7
Men, 20 years and over	7.9	5.7	5.5	5.5	5.4	5.4	5.4	5.5	5.4	5.4	5.5	5.2	5.8	5.6	5.3
Women, 20 years and over	6.9	5.8	5.9	5.7	5.8	5.5	5.5	5.9	5.6	5.9	5.8	5.9	5.8	5.7	5.7
Black, total	19.5	15.9	15.8	15.1	15.3	15.1	15.0	14.9	16.3	15.2	15.3	15.6	14.0	15.0	14.0
Both sexes, 16 to 19 years	48.5	42.7	41.3	41.9	40.2	41.2	42.1	42.1	43.1	41.9	39.0	40.4	38.1	41.3	34.4
Men, 16 to 19 years	48.8	42.7	40.5	41.0	43.8	42.0	43.8	45.3	41.1	40.9	38.5	38.4	40.7	43.3	34.1
Women, 16 to 19 years	48.2	42.6	42.2	43.0	36.2	40.2	40.1	38.5	45.3	43.1	39.5	42.5	35.2	39.0	34.9
Men, 20 years and over	18.1	14.3	14.1	13.5	13.4	12.8	13.3	12.7	14.4	13.3	13.6	13.6	12.2	12.6	11.8
Women, 20 years and over	16.5	13.5	13.8	12.6	13.4	13.5	12.7	12.8	13.9	12.9	13.2	13.7	12.3	13.2	13.2
Hispanic origin, total	13.7	10.7	10.6	11.0	10.3	10.4	10.6	9.7	9.7	10.2	10.3	10.7	10.6	11.2	10.3
Married men, spouse present	6.5	4.6	4.5	4.6	4.5	4.4	4.4	4.6	4.4	4.2	4.3	4.0	4.6	4.4	4.1
Married women, spouse present	7.0	5.7	5.8	5.7	5.7	5.4	5.4	5.7	5.4	5.9	5.9	5.8	5.9	5.7	5.4
Women who maintain families	12.2	10.3	10.3	10.1	10.4	10.8	9.6	10.0	11.0	10.2	10.8	10.9	9.8	10.2	11.1
Full-time workers	9.5	7.2	7.1	7.1	7.1	6.9	6.9	7.1	7.1	6.9	6.9	6.8	6.8	7.0	6.7
Part-time workers	10.4	9.3	9.6	9.3	9.1	8.6	8.8	9.3	8.7	9.6	9.7	10.3	9.9	9.5	9.0
Unemployed 15 weeks and over	3.8	2.4	2.3	2.3	2.2	2.1	2.1	2.0	2.1	2.1	2.1	1.9	2.0	2.0	2.0
Labor force time lost[1]	10.9	8.6	8.5	8.5	8.4	8.2	8.3	8.2	8.2	8.2	8.2	8.3	8.2	8.3	8.1
INDUSTRY															
Nonagricultural private wage and salary workers	9.9	7.4	7.4	7.3	7.2	7.2	7.2	7.3	7.3	7.2	7.3	7.2	7.4	7.3	7.1
Mining	17.0	10.0	10.2	8.6	10.5	11.7	10.7	10.1	10.9	11.0	10.9	7.3	11.1	9.8	8.3
Construction	18.4	14.3	14.1	13.9	13.7	14.2	13.7	13.4	13.4	13.3	13.3	10.2	13.7	13.4	13.1
Manufacturing	11.2	7.5	7.4	7.4	7.3	7.2	7.2	7.6	7.5	7.7	8.0	7.8	7.7	8.0	7.8
Durable goods	12.1	7.2	6.9	6.9	6.9	7.0	7.1	7.2	7.1	7.4	7.8	7.8	8.0	8.0	7.9
Nondurable goods	10.0	7.8	8.1	8.1	7.8	7.4	7.2	8.1	8.2	8.1	8.3	7.7	7.4	8.0	7.7
Transportation and public utilities	7.4	5.5	5.9	5.9	5.3	5.2	5.0	4.9	5.5	4.6	5.4	5.2	5.3	5.8	4.3
Wholesale and retail trade	10.0	8.0	7.7	8.0	7.9	7.6	7.5	7.7	7.7	7.5	7.3	7.9	7.7	7.5	7.7
Finance and service industries	7.2	5.9	6.0	5.6	5.7	5.8	5.9	5.9	5.7	5.7	5.7	6.2	5.8	5.6	5.5
Government workers	5.3	4.5	4.4	4.5	4.4	4.3	4.4	4.1	3.9	3.9	3.7	3.9	3.8	4.1	4.0
Agricultural wage and salary workers	16.0	13.5	13.1	14.7	13.7	11.2	12.2	15.5	13.6	12.2	13.1	11.5	12.1	14.3	14.3

[1] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

6. Unemployment rates by sex and age, seasonally adjusted

[Civilian workers]

Sex and age	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Total, 16 years and over	9.6	7.5	7.5	7.4	7.3	7.1	7.2	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.0
16 to 24 years	17.2	13.9	13.9	13.9	13.5	13 2	13.5	13.6	13.7	13.5	13.3	14.2	13.5	14.0	12.9
16 to 19 years	22.4	18.9	18.4	19.0	18.7	17.8	18.8	18.9	18.4	18.2	17.7	18.9	18:3	19.5	17.3
16 to 17 years	24.5	21.2	21.2	20.9	20.2	20.0	21.0	21.2	20.0	20.9	20.7	21.1	21.2	22.0	18.6
18 to 19 years	21.1	17.4	16.7	17.7	17.8	16.8	17.7	17.4	17.4	16.5	15.8	17.3	16.2	17.6	16.4
20 to 24 years	14.5	11.5	11.7	11.4	11.0	10.9	10.9	10.9	11.2	11.1	11.0	11.8	11.2	11.2	10.7
25 years and over	7.5	5.8	5.7	5.6	5.7	5.5	5.5	5.8	5.6	5.6	5.7	5.5	5.8	5.6	5.5
25 to 54 years	8.0	6.1	6.0	5.9	5.9	5.8	5.8	6.1	5.9	5.9	6.1	5.8	6.0	5.9	5.8
55 years and over	5.3	4.5	4.5	4.5	4.7	4.4	4.1	4.2	3.9	4.0	4.0	4.3	4.2	4.5	4.1
Men, 16 years and over	9.9	7.4	7.2	7.2	7.1	7.0	7.1	7.2	7.1	7.0	7.1	6.9	7.3	7.2	6.8
16 to 24 years	18.4	14.4	14.3	14.6	13.8	13.7	14.1	13.8	14.4	13.9	13.6	14.8	14.3	14.8	13.6
16 to 19 years	23.3	19.6	18.8	19.7	19.8	18.9	19.4	19.1	19.5	18.1	18.2	19.4	19.2	20.9	19.4
16 to 17 years	25.2	21.9	22.2	21.0	21 3	20.3	19.8	21.2	20.7	22.2	21.5	22.2	24.0	22.8	22.0
18 to 19 years	22.2	18.3	16.6	18.7	18.9	18.3	19.3	18.0	18.6	15.7	16.2	17.4	16.1	19.2	17.4
20 to 24 years	15.9	11.9	12.1	12.2	10 9	11.2	11.5	11.2	11.8	11.7	11.3	12.5	11.9	11.7	10.7
25 years and over	7.8	5.7	5.5	5.5	5.4	5.4	5.4	5.5	5.4	5.3	5.5	5.0	5.6	5.4	5.2
25 to 54 years	8.2	5.9	5.7	5.6	5.6	5.6	5.6	5.8	5.6	5.6	5.8	5.2	5.8	5.6	5.5
55 years and over	5.6	4.6	4.6	4.8	4.7	4.7	4.4	4.3	4.0	3.8	3.9	4.1	4.5	4.6	3.8
Women, 16 years and over	9.2	7.6	7.8	7 5	7.7	7.3	7.2	7.7	7.5	7.6	7.5	7.7	7.4	7.5	7.3
16 to 24 years	15.8	13.3	13.5	13.2	13.2	12.6	12.8	13.3	12.9	13.2	12.9	13.5	12.7	13.1	12.1
16 to 19 years	21.3	18.0	18.1	18.3	17.4	16.6	18.1	18.6	17.3	18.2	17.1	18.4	17.4	18.0	14.9
16 to 17 years	23.7	20.4	20.3	20.9	19.0	19.7	22.3	21.2	19.4	19.5	19.8	19.9	18.0	21.2	14.8
18 to 19 years	19.9	16.6	16.7	16.6	16.5	15.1	16.0	16.7	16.2	17.4	15.5	17.3	16.3	15 8	15.2
20 to 24 years	12.9	10.9	11.1	10.5	11.1	10.7	10.2	10.5	10.6	10.5	10.7	10.9	10.4	10.6	10.7
25 years and over	7.2	6.0	6.1	5.9	6.0	5.7	5.6	6.1	5 9	6.0	6.0	6.1	6.1	5.9	5.9
25 to 54 years	7.7	6.3	6.5	6.2	6.2	6.1	6.0	6.4	6.3	6.4	6.3	6.5	6.3	6.2	6.2
55 years and over	4.7	4.2	4.3	4.0	4.8	3.9	3.7	4.2	3.8	4.2	4.2	4.6	3.9	4.4	4.7

7. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Job losers	6,258	4,421	4,227	4,188	4,261	4,141	4,176	4,313	4,251	4,158	4,228	3,935	4,128	4,333	4,160
On layoff	1,780	1,171	1,146	1,110	1,151	1,068	1,070	1,229	1,240	1,163	1,208	1,059	1,124	1,130	1,099
Other job losers	4,478	3,250	3,081	3,078	3,110	3,073	3,106	3,084	3,011	2,995	3,019	2,876	3,004	3,203	3,061
Job leavers	830	823	833	841	829	869	858	884	865	848	838	868	1,001	902	865
Reentrants	2,412	2,184	2,294	2,254	2,150	2,161	2,218	2,244	2,233	2,341	2,312	2,428	2,219	2,143	2,162
New entrants	1,216	1,110	1,088	1,057	1,060	1,024	1,011	1,049	1,035	1,090	1,072	1,159	1,017	1,097	920
PERCENT DISTRIBUTION															
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	58.4	51.8	50.1	50.2	51.3	50.5	50.5	50.8	50.7	49.3	50.0	46.9	49.3	51.1	51.3
On layoff	16.6	13.7	13.6	13.3	13.9	13.0	12.9	14.5	14.8	13.8	14.3	12.6	13.4	13.3	13.6
Other job losers	41.8	38.1	36.5	36.9	37.5	37.5	37 6	36.3	35.9	35.5	35.7	34.3	35.9	37.8	37.8
Job leavers	7.7	9.6	9.9	10.1	10.0	10.6	10.4	10.4	10.3	10.0	9.9	10.3	12.0	10.6	10.7
Reentrants	22.5	25.6	27.2	27.0	25.9	26.4	26.8	26.4	26.6	27.7	27.4	28.9	26.5	25.3	26.7
New entrants	11.3	13.0	12.9	12.7	12.8	12.5	12.2	12.4	12.3	12.9	12.7	13.8	12.2	12.9	11.3
PERCENT OF CIVILIAN LABOR FORCE															
Job losers	5.6	3.9	3.7	3.7	3.7	3.6	3.6	3 8	3.7	3.6	3 7	3.4	3.6	3.8	3.6
Job leavers	.7	.7	.7	.7	7	.8	.7	.8	.8	.7	.7	.8	.9	.8	.8
Reentrants	2.2	1.9	2.0	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	1.9	1.9	1.9
New entrants	1.1	1.0	1.0	.9	.9	.9	.9	.9	.9	.9	.9	1.0	.9	1.0	.8

8. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Less than 5 weeks	3,570	3,350	3,513	3,313	3,395	3,352	3,282	3,662	3,524	3,590	3,558	3,659	3,458	3,578	3,372
5 to 14 weeks	2,937	2,451	2,406	2,533	2,406	2,324	2,516	2,552	2,469	2,478	2,525	2,635	2,547	2,508	2,497
15 weeks and over	4,210	2,737	2,621	2,605	2,527	2,428	2,374	2,243	2,416	2,400	2,377	2,247	2,317	2,348	2,264
15 to 26 weeks	1,652	1,104	1,116	1,106	1,092	990	972	941	1,076	1,065	1,022	1,040	1,011	1,094	1,050
27 weeks and over	2,559	1,634	1,505	1,499	1,435	1,438	1,402	1,302	1,340	1,335	1,354	1,207	1,306	1,254	1,214
Mean duration in weeks	20 0	18.2	17.6	17.3	16.7	17.4	17.3	15.3	15.9	15.9	16.1	14.9	15.4	15.4	15.6
Median duration in weeks	10.1	7.9	7.6	7.6	7.3	7.3	7.4	6.7	7.2	7.1	6.7	6.2	6.6	7.2	7.5

EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by over 200,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 12–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities; in wholesale and retail trade; in finance, insurance, and real estate; and in services industries. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI–W). The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries.

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received and are different from standard or scheduled hours. **Overtime hours** represent the portion of gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

The Diffusion Index, introduced in table 17 of the May 1983 issue, represents the percent of 185 nonagricultural industries in which employment was rising over the indicated period. One-half of the industries with unchanged employment are counted as rising. In line with Bureau practice, data for the 3-, 6-, and 9-month spans are seasonally adjusted, while that for the 12-month span is unadjusted. The diffusion index is useful for measuring the dispersion of economic gains or losses and is also an economic indicator.

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of May 1985 data, published in the July 1985 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Unadjusted data have been revised back to April 1983; seasonally adjusted data have been revised back to January 1980. Unadjusted data from April 1984 forward, and seasonally adjusted data from January 1981 forward are subject to revision in future benchmarks. Earlier comparable unadjusted and seasonally adjusted data are published in *Employment, Hours, and Earnings, United States, 1909–84*, BLS Bulletin 1312–12.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9–20. See also BLS *Handbook of Methods*, Bulletin 2134–1 (Bureau of Labor Statistics, 1982).

9. Employment, by industry, selected years, 1950–84

[Nonagricultural payroll data, in thousands]

Year	Total	Private sector	Goods-producing				Service-producing						Government			
			Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Total	Federal	State	Local
1950	45,197	39,170	18,506	901	2,364	15,241	26,691	4,034	2,635	6,751	1,888	5,357	6,026	1,928	[1]	[1]
1955	50,641	43,727	20,513	792	2,839	16,882	30,128	4,141	2,926	7,610	2,298	6,240	6,914	2,187	1,168	3,558
1960[2]	54,189	45,836	20,434	712	2,926	16,796	33,755	4,004	3,143	8,248	2,629	7,378	8,353	2,270	1,536	4,547
1964	58,283	48,686	21,005	634	3,097	17,274	37,278	3,951	3,337	8,823	2,911	8,660	9,596	2,348	1,856	5,392
1965	60,765	50,689	21,926	632	3,232	18,062	38,839	4,036	3,466	9,250	2,977	9,036	10,074	2,378	1,996	5,700
1966	63,901	53,116	23,158	627	3,317	19,214	40,743	4,158	3,597	9,648	3,058	9,498	10,784	2,564	2,141	6,080
1967	65,803	54,413	23,308	613	3,248	19,447	42,495	4,268	3,689	9,917	3,185	10,045	11,391	2,719	2,302	6,371
1968	67,897	56,058	23,737	606	3,350	19,781	44,160	4,318	3,779	10,320	3,337	10,567	11,839	2,737	2,442	6,660
1969	70,384	58,189	24,361	619	3,575	20,167	46,023	4,442	3,907	10,798	3,512	11,169	12,195	2,758	2,533	6,904
1970	70,880	58,325	23,578	623	3,588	19,367	47,302	4,515	3,993	11,047	3,645	11,548	12,554	2,731	2,664	7,158
1971	71,214	58,331	22,935	609	3,704	18,623	48,278	4,476	4,001	11,351	3,772	11,797	12,881	2,696	2,747	7,437
1972	73,675	60,341	23,668	628	3,889	19,151	50,007	4,541	4,113	11,836	3,908	12,276	13,334	2,684	2,859	7,790
1973	76,790	63,058	24,893	642	4,097	20,154	51,897	4,656	4,277	12,329	4,046	12,857	13,732	2,663	2,923	8,146
1974	78,265	64,095	24,794	697	4,020	20,077	53,471	4,725	4,433	12,554	4,148	13,441	14,170	2,724	3,039	8,407
1975	76,945	62,259	22,600	752	3,525	18,323	54,345	4,542	4,415	12,645	4,165	13,892	14,686	2,748	3,179	8,758
1976	79,382	64,511	23,352	779	3,576	18,997	56,030	4,582	4,546	13,209	4,271	14,551	14,871	2,733	3,273	8,865
1977	82,471	67,344	24,346	813	3,851	19,682	58,125	4,713	4,708	13,808	4,467	15,303	15,127	2,727	3,377	9,023
1978	86,697	71,026	25,585	851	4,229	20,505	61,113	4,923	4,969	14,573	4,724	16,252	15,672	2,753	3,474	9,446
1979	89,823	73,876	26,461	958	4,463	21,040	63,363	5,136	5,204	14,989	4,975	17,112	15,947	2,773	3,541	9,633
1980	90,406	74,166	25,658	1,027	4,346	20,285	64,748	5,146	5,275	15,035	5,160	17,890	16,241	2,866	3,610	9,765
1981	91,156	75,126	25,497	1,139	4,188	20,170	65,659	5,165	5,358	15,189	5,298	18,619	16,031	2,772	3,640	9,619
1982	89,566	73,729	23,813	1,128	3,905	18,781	65,753	5,082	5,278	15,179	5,341	19,036	15,837	2,739	3,640	9,458
1983	90,196	74,330	23,334	952	3,948	18,434	66,862	4,954	5,268	15,613	5,468	19,694	15,869	2,774	3,662	9,434
1984	94,461	78,477	24,730	974	4,345	19,412	69,731	5,171	5,550	16,584	5,682	20,761	15,984	2,807	3,712	9,465

[1] Not available.

[2] Data include Alaska and Hawaii beginning in 1959.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

10. Employment, by State

[Nonagricultural payroll data, in thousands]

State	July 1984	June 1985	July 1985[p]	State	July 1984	June 1985	July 1985[p]
Alabama	1,391.6	1,398.0	1,404.5	Montana	282.3	288.1	280.6
Alaska	241.2	237.5	247.2	Nebraska	628.9	646.1	637.7
Arizona	1,157.0	1,247.1	1,237.1	Nevada	430.5	449.3	449.6
Arkansas	779.6	794.0	789.4	New Hampshire	444.9	477.6	477.4
California	10,566.3	10,890.3	10,807.9	New Jersey	3,399.4	3,500.6	3,496.3
Colorado	1,385.2	1,420.1	1,408.9	New Mexico	502.1	518.1	513.4
Connecticut	1,530.7	1,576.2	1,559.4	New York	7,597.1	7,750.1	7,728.9
Delaware	283.8	293.9	294.9	North Carolina	2,528.5	2,636.2	2,582.0
District of Columbia	630.4	626.8	643.1	North Dakota	253.5	254.9	253.1
Florida	4,156.2	4,422.7	4,377.8	Ohio	4,260.2	4,392.3	4,358.5
Georgia	2,459.4	2,608.5	2,600.7	Oklahoma	1,185.2	1,192.9	1,180.4
Hawaii	416.2	419.7	421.3	Oregon	999.9	1,036.8	1,016.7
Idaho	325.1	337.8	333.9	Pennsylvania	4,659.3	4,757.8	4,733.1
Illinois	4,662.2	4,707.1	4,711.0	Rhode Island	409.9	420.6	412.6
Indiana	2,148.0	2,210.6	2,205.7	South Carolina	1,277.0	1,336.8	1,326.4
Iowa	1,053.4	1,065.6	1,050.7	South Dakota	246.9	251.1	246.6
Kansas	955.9	988.4	975.1	Tennessee	1,817.8	1,862.9	1,864.6
Kentucky	1,200.3	1,259.0	1,247.6	Texas	6,440.7	6,603.2	6,599.5
Louisiana	1,602.1	1,593.3	1,575.4	Utah	600.2	624.0	621.0
Maine	459.3	463.5	462.6	Vermont	215.9	220.9	220.7
Maryland	1,820.7	1,902.6	1,906.9	Virginia	2,332.5	2,448.7	2,414.9
Massachusetts	2,854.9	3,013.3	2,979.6	Washington	1,639.9	1,704.0	1,682.9
Michigan	3,331.4	3,463.9	3,433.9	West Virginia	604.2	593.9	595.4
Minnesota	1,828.2	1,903.1	1,881.7	Wisconsin	1,949.7	2,014.5	1,990.8
Mississippi	816.7	841.3	837.4	Wyoming	205.0	208.8	206.5
Missouri	2,008.1	2,051.8	2,032.5				
				Virgin Islands	37.0	36.0	36.6

p = preliminary.

11. Employment, by industry, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
TOTAL	90,196	94,461	94,893	95,238	95,573	95,882	96,092	96,419	96,591	96,910	97,120	97,421	97,473	97,722	98,010
PRIVATE SECTOR	74,330	78,477	78,885	79,154	79,460	79,764	80,010	80,319	80,480	80,767	80,962	81,208	81,260	81,373	81,672
GOODS-PRODUCING	23,334	24,730	24,889	24,851	24,918	24,955	25,045	25,112	25,062	25,056	25,090	25,066	25,010	24,978	25,031
Mining	952	974	984	985	979	978	973	974	976	977	982	982	974	970	961
Oil and gas extraction	598	613	618	622	623	626	624	621	620	618	623	624	619	619	610
Construction	3,948	4,345	4,366	4,386	4,403	4,424	4,469	4,534	4,525	4,553	4,641	4,658	4,638	4,653	4,678
General building contractors	1,020	1,158	1,163	1,171	1,171	1,179	1,190	1,219	1,214	1,223	1,233	1,234	1,223	1,228	1,232
Manufacturing	18,434	19,412	19,539	19,480	19,536	19,553	19,603	19,604	19,561	19,526	19,467	19,426	19,398	19,355	19,392
Production workers	12,530	13,310	13,396	13,341	13,380	13,376	13,409	13,399	13,347	13,309	13,249	13,203	13,169	13,142	13,177
Durable goods	10,732	11,522	11,638	11,611	11,652	11,666	11,701	11,702	11,675	11,651	11,608	11,586	11,560	11,514	11,556
Production workers	7,117	7,749	7,832	7,806	7,835	7,832	7,855	7,843	7,806	7,776	7,730	7,704	7,671	7,637	7,671
Lumber and wood products	657	707	707	705	708	709	711	709	704	701	694	697	694	695	699
Furniture and fixtures	448	487	489	486	491	495	497	499	498	499	497	493	494	494	496
Stone, clay, and glass products	570	595	595	596	597	598	601	602	600	601	600	599	598	599	598
Primary metal industries	832	858	863	852	851	848	844	844	840	832	823	819	815	805	797
Blast furnaces and basic steel products	341	334	331	324	320	318	316	315	313	311	306	305	304	301	292
Fabricated metal products	1,370	1,464	1,478	1,476	1,483	1,486	1,489	1,486	1,483	1,480	1,479	1,477	1,472	1,465	1,460
Machinery, except electrical	2,033	2,197	2,232	2,225	2,233	2,232	2,232	2,228	2,224	2,220	2,207	2,203	2,191	2,177	2,183
Electrical and electronic equipment	2,013	2,208	2,237	2,241	2,247	2,250	2,253	2,252	2,248	2,243	2,223	2,216	2,205	2,194	2,196
Transportation equipment	1,747	1,906	1,934	1,927	1,935	1,940	1,965	1,974	1,972	1,969	1,982	1,981	1,990	1,988	2,025
Motor vehicles and equipment	754	860	880	866	869	873	888	891	876	867	876	873	875	867	891
Instruments and related products	692	714	717	718	720	722	723	723	725	727	726	723	725	725	725
Miscellaneous manufacturing	371	384	386	385	387	386	386	385	381	379	377	378	376	372	377
Nondurable goods	7,702	7,890	7,901	7,869	7,884	7,887	7,902	7,902	7,886	7,875	7,859	7,840	7,838	7,841	7,836
Production workers	5,413	5,561	5,564	5,535	5,545	5,544	5,554	5,556	5,541	5,533	5,519	5,499	5,498	5,505	5,506
Food and kindred products	1,615	1,619	1,617	1,610	1,617	1,620	1,630	1,633	1,633	1,638	1,630	1,634	1,644	1,632	1,634
Tobacco manufactures	68	65	64	66	66	65	66	67	66	66	66	66	66	65	64
Textile mill products	741	746	744	738	730	726	722	720	712	706	707	701	699	696	695
Apparel and other textile products	1,163	1,197	1,196	1,181	1,181	1,180	1,184	1,182	1,175	1,167	1,164	1,153	1,142	1,159	1,141
Paper and allied products	661	681	684	680	683	682	683	683	682	682	681	682	684	683	683
Printing and publishing	1,299	1,372	1,382	1,387	1,392	1,397	1,397	1,403	1,406	1,407	1,411	1,414	1,419	1,424	1,429
Chemicals and allied products	1,043	1,048	1,051	1,050	1,051	1,052	1,054	1,052	1,052	1,052	1,049	1,044	1,042	1,041	1,040
Petroleum and coal products	196	189	188	187	188	187	186	185	184	183	182	181	180	178	179
Rubber and miscellaneous plastics products	711	782	786	784	792	796	799	798	799	798	795	791	789	787	795
Leather and leather products	205	192	189	186	184	182	181	179	177	176	174	174	173	176	176
SERVICE-PRODUCING	66,862	69,731	70,004	70,387	70,655	70,927	71,047	71,307	71,529	71,854	72,030	72,355	72,463	72,744	72,979
Transportation and public utilities	4,954	5,171	5,194	5,210	5,223	5,229	5,246	5,259	5,272	5,269	5,278	5,301	5,295	5,306	5,290
Transportation	2,745	2,929	2,953	2,970	2,983	2,993	3,009	3,015	3,029	3,028	3,037	3,057	3,052	3,066	3,045
Communication and public utilities	2,209	2,242	2,241	2,240	2,240	2,236	2,237	2,244	2,243	2,241	2,241	2,244	2,243	2,240	2,245
Wholesale trade	5,268	5,550	5,573	5,610	5,636	5,647	5,665	5,686	5,697	5,714	5,733	5,748	5,768	5,776	5,804
Durable goods[1]	3,070	3,272	3,296	3,311	3,321	3,334	3,347	3,358	3,367	3,377	3,388	3,402	3,414	3,425	3,441
Nondurable goods[1]	2,197	2,278	2,277	2,299	2,315	2,313	2,318	2,328	2,330	2,337	2,345	2,346	2,354	2,351	2,363
Retail trade	15,613	16,584	16,673	16,750	16,859	16,994	17,026	17,090	17,160	17,249	17,280	17,392	17,425	17,464	17,511
General merchandise stores	2,165	2,278	2,285	2,298	2,311	2,357	2,323	2,341	2,343	2,349	2,348	2,371	2,361	2,357	2,357
Food stores	2,556	2,655	2,661	2,679	2,706	2,728	2,745	2,753	2,773	2,790	2,794	2,823	2,831	2,842	2,848
Automotive dealers and service stations	1,674	1,802	1,815	1,824	1,839	1,848	1,851	1,855	1,865	1,873	1,884	1,890	1,895	1,894	1,898
Eating and drinking places	5,042	5,403	5,454	5,472	5,493	5,512	5,535	5,559	5,588	5,615	5,642	5,660	5,692	5,728	5,725
Finance, insurance, and real estate	5,468	5,682	5,707	5,719	5,737	5,755	5,776	5,790	5,809	5,835	5,858	5,888	5,906	5,934	5,972
Finance	2,741	2,855	2,866	2,874	2,883	2,891	2,902	2,910	2,919	2,933	2,941	2,956	2,968	2,985	3,008
Insurance	1,720	1,753	1,758	1,763	1,770	1,774	1,780	1,783	1,789	1,792	1,799	1,808	1,814	1,818	1,827
Real estate	1,007	1,074	1,083	1,082	1,084	1,090	1,094	1,097	1,101	1,110	1,118	1,124	1,124	1,131	1,137
Services	19,694	20,761	20,849	21,014	21,087	21,184	21,252	21,382	21,480	21,644	21,723	21,813	21,856	21,915	22,064
Business services	3,562	4,076	4,152	4,183	4,205	4,234	4,259	4,295	4,324	4,377	4,402	4,424	4,441	4,446	4,483
Health services	5,988	6,104	6,070	6,117	6,125	6,139	6,154	6,169	6,186	6,204	6,218	6,240	6,243	6,258	6,294
Government	15,869	15,984	16,008	16,084	16,113	16,118	16,082	16,100	16,111	16,143	16,158	16,213	16,213	16,349	16,338
Federal	2,774	2,807	2,812	2,827	2,823	2,831	2,836	2,836	2,834	2,850	2,859	2,873	2,872	2,876	2,887
State	3,662	3,712	3,723	3,733	3,727	3,732	3,722	3,730	3,733	3,744	3,749	3,759	3,765	3,803	3,818
Local	9,434	9,465	9,473	9,524	9,563	9,555	9,524	9,534	9,544	9,549	9,550	9,581	9,576	9,670	9,633

p = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

12. Average hours and earnings, by industry, 1968–84

[Production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings
	Private sector			Mining			Construction		
1968	37 8	$2.85	$107.73	42 6	$3 35	$142.71	37.3	$4.41	$164.49
1969	37 7	3.04	114.61	43.0	3.60	154.80	37.9	4.79	181.54
1970	37 1	3 23	119.83	42 7	3 85	164.40	37.3	5.24	195.45
1971	36 9	3.45	127.31	42 4	4.06	172.14	37.2	5 69	211.67
1972	37.0	3.70	136.90	42.6	4.44	189.14	36 5	6.06	221.19
1973	36 9	3.94	145.39	42 4	4.75	201 40	36.8	6.41	235.89
1974	36 5	4 24	154.76	41 9	5.23	219.14	36.6	6 81	249.25
1975	36 1	4 53	163 53	41.9	5.95	249.31	36.4	7.31	266.08
1976	36 1	4.86	175.45	42 4	6 46	273.90	36.8	7.71	283.73
1977	36.0	5 25	189 00	43 4	6.94	301.20	36.5	8.10	295.65
1978	35 8	5.69	203 70	43 4	7 67	332 88	36 8	8 66	318 69
1979	35 7	6 16	219 91	43 0	8 49	365 07	37.0	9 27	342 99
1980	35 3	6.66	235 10	43 3	9 17	397 06	37.0	9 94	367.78
1981	35 2	7 25	255 20	43.7	10.04	438.75	36 9	10.82	399.26
1982	34.8	7.68	267 26	42 7	10.77	459 88	36 7	11.63	426.82
1983	35 0	8.02	280 70	42 5	11 28	479 40	37.1	11.94	442 97
1984	35 3	8 33	294 05	43.3	11.63	503 58	37.7	12 12	456.92
	Manufacturing			Transportation and public utilities			Wholesale trade		
1968	40.7	$3.01	$122.51	40 6	$3 42	$138.85	40.1	$3 05	$122.31
1969	40.6	3 19	129 51	40 7	3 63	147.74	40 2	3.23	129.85
1970	39.8	3.35	133.33	40.5	3 85	155 93	39 9	3.44	137.26
1971	39.9	3.57	142.44	40.1	4.21	168.82	39 5	3.65	129.85
1972	40.5	3.82	154.71	40.4	4.65	187.86	39 4	3 85	144.18
1973	40.7	4.09	166.46	40 5	5.02	203.31	39.3	4.08	151.69
1974	40.0	4 42	176.80	40.2	5.41	217.48	38 8	4.39	160 34
1975	39.5	4.83	190.79	39.7	5.88	233 44	38 7	4 73	183.05
1976	40.1	5.22	209.32	39 8	6.45	256 71	38.7	5.03	194 66
1977	40.3	5.68	228.90	39 9	6 99	278.90	38 8	5 39	209.13
1978	40.4	6.17	249.27	40.0	7.57	302 80	38.8	5.88	228.14
1979	40 2	6.70	269 34	39.9	8.16	325 58	38.8	6.39	247.93
1980	39.7	7.27	288.62	39.6	8 87	351.25	38.5	6.96	267.96
1981	39.8	7.99	318.00	39.4	9.70	382.18	38.5	7 56	291 06
1982	38.9	8.49	330 26	39.0	10.32	402.48	38.3	8.09	309.85
1983	40.1	8.83	354.08	39.0	10.79	420 81	38.5	8.55	329.18
1984	40 7	9 18	373.63	39.4	11.11	437.73	38 6	8.96	345.86
	Retail trade			Finance, insurance, and real estate			Services		
1968	34.7	$2.16	$74.95	37.0	$2.75	$101.75	34 7	$2.42	$83 97
1969	34.2	2.30	78.66	37.1	2 93	108.70	34 7	2.61	90 57
1970	33.8	2.44	82.47	36.7	3 07	112.67	34 4	2.81	96.66
1971	33 7	2.60	87.62	36.6	3.22	117.85	33.9	3.04	103.06
1972	33.4	2.75	91.85	36.6	3.36	122 98	33.9	3.27	110.85
1973	33.1	2.91	96.32	36 6	3.53	129 20	33.8	3.47	117 29
1974	32.7	3.14	102.68	36 5	3 77	137.61	33 6	3.75	126.00
1975	32.4	3.36	108.86	36.5	4.06	148 19	33.5	4.02	134.67
1976	32 1	3.57	114.60	36 4	4.27	155.43	33 3	4.31	143.52
1977	31.6	3.85	121.66	36.4	4.54	165 26	33.0	4.65	153.45
1978	31.0	4.20	130.20	36.4	4 89	178.00	32 8	4.99	163.67
1979	30.6	4.53	138 62	36 2	5.27	190.77	32 7	5.36	175.27
1980	30.2	4.88	147.38	36 2	5.79	209.60	32 6	5 85	190.71
1981	30 1	5.25	158.03	36.3	6.31	229 05	32 6	6.41	208.97
1982	29.9	5.48	163.85	36.2	6 78	245.44	32 6	6.92	225.59
1983	29 8	5 74	171.05	36 2	7.29	263 90	32.7	7.31	239 04
1984	30.0	5.88	176 40	36.5	7 62	278 13	32.8	7.64	250.59

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours, by industry, seasonally adjusted

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
PRIVATE SECTOR	35.0	35.3	35.2	35.3	35.2	35.2	35.2	35.1	35.1	35.2	35.0	35.1	35.1	35.0	35.1
CONSTRUCTION	37.1	37.7	37.6	37.9	37.7	38.0	37.8	37.7	37.8	38.1	38.0	37.6	37.2	37.6	37.5
MANUFACTURING	40.1	40.7	40.5	40.6	40.5	40.5	40.6	40.6	40.1	40.4	40.2	40.4	40.4	40 3	40.5
Overtime hours	3.0	3.4	3.3	3.3	3.3	3.4	3.4	3.4	3.3	3.2	3.4	3.1	3.2	3.3	3.3
Durable goods	40.7	41.4	41.3	41.4	41.3	41.2	41.3	41.3	40.7	41.1	40.9	41.1	41.2	41.0	41.2
Overtime hours	3.0	3.6	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.5	3.6	3.2	3.3	3.3	3.5
Lumber and wood products	40.1	39.9	39.6	40.1	39.7	39.6	39.8	39.7	38.9	39.6	39.5	39.8	40.1	39.6	39 6
Furniture and fixtures	39.4	39.7	39.3	39.8	39.6	39.7	39.6	40.4	39.5	39.5	39.3	38.9	38.9	38.9	39.4
Stone, clay, and glass products	41.5	42.0	41.8	41.9	41.9	41.8	41.8	41.7	41.6	42.0	42.0	42.1	41.9	42.0	41.8
Primary metal industries	40.5	41.7	41.2	41.3	41.3	41.5	41.2	41.0	40.9	41 1	41.0	41.2	41.6	41.4	41.8
Blast furnaces and basic steel products	39.5	40.6	39.8	40.1	40.1	40.9	39.8	39.9	40.5	40.5	40.2	40.7	41.2	41.4	42.2
Fabricated metal products	40.6	41.4	41.2	41.4	41.3	41.1	41.4	41.4	40.9	41.1	41.1	41.1	41.3	41.3	41.2
Machinery, except electrical	40.5	41.9	42.0	42.0	41.9	41.8	41.7	41.7	41.1	41.6	41.2	41.4	41.6	41.3	41.5
Electrical and electronic equipment	40.5	41.0	41.0	41.1	40.9	40 9	41.0	40.8	40.2	40.7	40.2	40.4	40.6	40.3	40.5
Transportation equipment	42.1	42.7	42.6	42.8	42.6	42.4	42.8	43.1	41.9	42.5	42.3	42.6	42.3	42.5	43.1
Motor vehicles and equipment	43.3	43.8	43 5	43.7	43 5	43.5	44.0	44.3	42.4	43.2	43.3	43.5	42.7	43.3	44.3
Instruments and related products	40.4	41.3	41.2	41 5	41.3	41.4	41.8	41.2	40.7	41.0	40.7	40.9	41.1	40.6	40.8
Miscellaneous manufacturing	39.1	39.4	39.2	39.4	39.3	39.3	39.3	39.2	39.0	39.1	39.0	39.3	39.4	39.0	39.5
Nondurable goods	39.4	39.6	39.5	39.5	39.4	39.5	39.6	39.5	39.3	39.4	39.1	39.4	39.4	39.4	39.5
Overtime hours	3.0	3.1	3.1	3.0	3.0	3.1	3.0	3.0	2.9	2.9	3.0	2.9	3.0	3.0	3.1
Food and kindred products	39.5	39.8	39.7	39.7	39.7	39.7	40.1	39.8	39.7	39.8	39.6	40.1	39.6	40.1	39.9
Tobacco manufactures	37.4	38.9	38.9	38.3	38.7	39.0	38.8	38.3	39.2	38.9	35.4	37.0	36.6	34.8	37.7
Textile mill products	40.4	39.9	39.5	39.3	38.8	39.1	39.2	39.2	38.8	39.1	38.8	38.9	39.4	39.2	39.7
Apparel and other textile products	36.2	36.4	36.1	36.1	36.0	36.1	36.3	36.2	35.9	36.1	35.6	36.2	36.3	36.3	36.2
Paper and allied products	42.6	43.1	43.0	43.1	43.0	43 1	43.1	43.0	42.9	42.9	43.0	43.0	42.9	42.7	43.0
Printing and publishing	37.6	37.9	37.8	37.9	37.8	37.8	37.7	37.8	37.7	37 6	37.6	37.4	37.5	37.5	38.1
Chemicals and allied products	41.6	41.9	41.9	41.8	41.7	41.8	41.9	42.0	41.9	42.1	41.9	41.9	42.0	41.9	41.9
Petroleum and coal products	43.9	43.7	43.9	43.4	43.6	43.4	43.0	43.2	43.1	43.3	42.0	41.7	42.6	42.5	42 7
Leather and leather products	36.8	36.8	36.2	36.5	36.6	36.6	36.9	36.8	36.4	37.1	37.0	37.1	37.0	36.9	37.5
TRANSPORTATION AND PUBLIC UTILITIES	39.0	39.4	39.4	39.8	39.2	39.4	39.3	39.3	39.4	39.5	39.4	39.5	39.5	39.4	39.7
WHOLESALE TRADE	38.5	38.6	38.7	38.7	38.6	38.6	38.6	38.6	38.6	38.7	38.6	38.7	38.8	38.6	38.5
RETAIL TRADE	29.8	30.0	29.9	29.9	29.8	29.9	29.9	29.8	29.8	29.8	29.7	29.9	29.9	29.7	29.7
SERVICES	32.7	32.8	32.7	32.8	32.8	32.8	32.9	32.7	32.8	32.8	32.7	32.8	32.8	32.6	32.8

p = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
PRIVATE SECTOR	$8.02	$8.33	$8.30	$8.43	$8.40	$8.43	$8.46	$8.50	$8.52	$8.52	$8.54	$8.53	$8.56	$8.54	$8.54
Seasonally adjusted	(1)	(1)	8.35	8.40	8.38	8.42	8.47	8.44	8.49	8.52	8.54	c8.55	8.59	8.57	8.60
MINING	11.28	11.63	11.62	11.72	11.58	11.63	11.70	11.86	11.90	11.91	11.93	11.86	11.99	11.87	11.90
CONSTRUCTION	11.94	12.12	12.10	12.24	12.23	12.10	12.26	12.30	12.33	12.22	12.21	12.19	12.12	12.16	12.23
MANUFACTURING	8.83	9.18	9.15	9.24	9.24	9.31	9.40	9.43	9.43	9.45	9.48	9.48	9.50	9.52	9.50
Durable goods	9.39	9.74	9.70	9.79	9.78	9.85	9.96	9.99	9.99	10.01	10.03	10.04	10.08	10.10	10.09
Lumber and wood products	7.80	8.03	8.10	8.20	8.11	8.06	8.09	8.10	8.09	8.06	8.04	8.12	8.24	8.17	8.27
Furniture and fixtures	6.62	6.85	6.88	6.94	6.93	6.95	6.99	7.01	7.01	7.07	7.08	7.11	7.18	7.20	7.22
Stone, clay, and glass products	9.28	9.57	9.63	9.65	9.64	9.67	9.68	9.70	9.73	9.71	9.80	9.80	9.84	9.88	9.90
Primary metal industries	11.35	11.47	11.38	11.43	11.36	11.49	11.49	11.55	11.69	11.66	11.64	11.64	11.65	11.79	11.61
Blast furnaces and basic steel products	12.89	12.99	12.90	13.01	12.86	12.99	12.95	13.07	13.42	13.27	13.32	13.31	13.29	13.51	13.29
Fabricated metal products	9.12	9.38	9.33	9.43	9.40	9.44	9.58	9.59	9.59	9.62	9.64	9.63	9.65	9.67	9.64
Machinery, except electrical	9.55	9.96	9.93	10.02	10.02	10.07	10.16	10.13	10.14	10.15	10.17	10.22	10.28	10.32	10.31
Electrical and electronic equipment	8.67	9.04	9.05	9.13	9.15	9.20	9.32	9.33	9.33	9.39	9.40	9.39	9.46	9.47	9.52
Transportation equipment	11.67	12.22	12.16	12.26	12.32	12.45	12.62	12.67	12.63	12.59	12.63	12.63	12.66	12.63	12.70
Motor vehicles and equipment	12.14	12.74	12.64	12.74	12.86	13.02	13.27	13.41	13.35	13.29	13.40	13.38	13.39	13.37	13.39
Instruments and related products	8.48	8.85	8.89	8.96	8.93	8.95	9.03	9.00	9.11	9.10	9.11	9.13	9.15	9.21	9.25
Miscellaneous manufacturing	6.81	7.04	7.01	7.05	7.05	7.06	7.16	7.23	7.19	7.20	7.22	7.28	7.28	7.30	7.29
Nondurable goods	8.08	8.37	8.37	8.44	8.44	8.52	8.55	8.59	8.60	8.61	8.67	8.64	8.65	8.70	8.67
Food and kindred products	8.19	8.38	8.33	8.35	8.31	8.43	8.45	8.48	8.51	8.53	8.59	8.58	8.55	8.55	8.51
Tobacco manufactures	10.38	11.27	10.92	10.52	10.60	11.93	11.17	11.39	11.80	12.00	12.16	12.65	12.83	12.92	12.45
Textile mill products	6.18	6.46	6.47	6.50	6.49	6.55	6.57	6.59	6.60	6.64	6.70	6.68	6.69	6.69	6.74
Apparel and other textile products	5.38	5.55	5.55	5.63	5.61	5.61	5.68	5.73	5.70	5.73	5.74	5.69	5.70	5.69	5.69
Paper and allied products	9.93	10.41	10.47	10.51	10.52	10.64	10.66	10.63	10.64	10.64	10.72	10.75	10.79	10.89	10.93
Printing and publishing	9.11	9.40	9.44	9.53	9.50	9.56	9.57	9.58	9.60	9.61	9.60	9.60	9.61	9.66	9.61
Chemicals and allied products	10.58	11.08	11.09	11.20	11.29	11.31	11.34	11.39	11.39	11.37	11.48	11.46	11.52	11.49	11.54
Petroleum and coal products	13.28	13.43	13.30	13.52	13.51	13.66	13.62	13.96	13.99	14.06	14.18	14.00	13.97	13.99	13.90
Rubber and miscellaneous plastics products	8.00	8.29	8.29	8.32	8.32	8.40	8.44	8.49	8.48	8.46	8.48	8.45	8.50	8.55	8.49
Leather and leather products	5.54	5.70	5.68	5.73	5.72	5.76	5.80	5.72	5.79	5.82	5.84	5.83	5.83	5.82	5.83
TRANSPORTATION AND PUBLIC UTILITIES	10.79	11.11	11.13	11.22	11.18	11.25	11.28	11.26	11.27	11.24	11.27	11.24	11.32	11.38	11.38
WHOLESALE TRADE	8.55	8.96	8.96	9.06	9.00	9.08	9.19	9.16	9.22	9.19	9.24	9.24	9.28	9.26	9.23
RETAIL TRADE	5.74	5.88	5.82	5.88	5.88	5.93	5.89	5.97	5.99	5.97	5.96	5.97	5.94	5.94	5.92
FINANCE, INSURANCE, AND REAL ESTATE	7.29	7.62	7.57	7.76	7.67	7.71	7.78	7.77	7.87	7.87	7.85	7.83	7.95	7.87	7.87
SERVICES	7.31	7.64	7.56	7.72	7.71	7.77	7.84	7.84	7.87	7.87	7.89	c7.88	7.91	7.86	7.86

[1] Not available.

c = corrected.

p = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

15. The Hourly Earnings Index, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls; 1977 = 100]

Industry	Not seasonally adjusted					Seasonally adjusted						
	Aug. 1984	June 1985	July 1985[p]	Aug. 1985[p]	Percent change from: Aug. 1984 to Aug. 1985	Aug. 1984	Apr. 1985	May 1985	June 1985	July 1985[p]	Aug. 1985[p]	Percent change from: July 1985 to Aug. 1985
PRIVATE SECTOR (in current dollars)	160.3	165.2	165.1	165.0	2.9	160.8	164.8	164.9	165.7	165.5	165.5	(2)
Mining	174.2	178.9	178.8	178.8	2.7	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Construction	148.1	148.4	149.0	149.0	.6	147.7	150.4	150.0	149.3	149.2	148.5	−0.4
Manufacturing	162.8	168.5	169.0	168.6	3.5	163.5	167.9	168.4	168.6	168.9	169.3	.2
Transportation and public utilities	161.5	165.1	165.4	164.9	2.1	161.6	165.0	165.0	166.6	166.4	165.1	−.8
Wholesale trade	165.7	171.3	170.9	170.8	3.1	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Retail trade	153.2	156.0	155.9	155.7	1.7	153.7	155.6	155.9	155.9	156.0	156.2	.1
Finance, insurance, and real estate	164.6	172.1	170.6	170.5	3.6	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Services	161.8	168.8	167.9	168.1	3.9	163.1	167.8	167.6	169.8	169.1	169.4	−.2
PRIVATE SECTOR (in constant dollars)	93.7	94.1	93.9	(3)	(3)	94.2	94.4	94.3	94.5	94.3	(3)	(3)

[1] This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle, irregular components, or both, and consequently cannot be separated with sufficient precision.

[2] Percent change is less than 0.05 percent.

[3] Not available.

p = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings, by industry

[Production or nonsupervisory workers on private nonagricultural payrolls]

Industry	Annual average		1984					1985							
	1983	1984	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July[p]	Aug.[p]
PRIVATE SECTOR															
Current dollars	$280.70	$294.05	$294.65	$298.42	$294.84	$295.89	$300.33	$294.95	$294.79	$298.20	$298.05	$298.55	$303.02	$301.46	$302.32
Seasonally adjusted	([1])	([1])	293.92	296.52	294.98	296.38	298.14	296.24	298.00	299.90	298 90	[c]300.11	301 51	299.95	301.86
Constant (1977) dollars	171.37	173.48	172.31	173.50	171.42	172.23	174.61	171.28	170.50	171.68	170.80	170.50	172.56	171.48	([1])
MINING	479.40	503.58	505.47	515.68	500.26	505.91	515.97	508.79	514.08	519.28	516.57	515.91	523.96	$508.04	$508.13
CONSTRUCTION	442.97	456.92	464.64	471.24	464.74	451.33	460.98	447.72	451.28	460.69	461.54	464.44	461.77	469.38	468.41
MANUFACTURING															
Current dollars	354.08	373.63	369.66	376.07	374.22	378.92	387.28	380.03	374.37	381.78	380.15	382.04	385.70	381.75	383.80
Constant (1977) dollars	216.17	220.43	216.18	218.65	217.57	220.56	225.16	220.69	216.52	219.79	217.85	218.18	219.65	217.15	([1])
Durable goods	382.17	403.24	397.70	406.29	403.91	407.79	419.32	410.59	403.60	412.41	410.23	411 64	417.31	410.06	$412.68
Lumber and wood products	312.78	320.40	324.00	332.10	322.78	315.95	321.98	315.90	309.85	317.56	317.58	325.61	336.19	323.53	330.80
Furniture and fixtures	260.83	271.95	272.45	278.29	278.59	278 70	283 79	276.19	270.59	277.85	276.83	275.16	281.46	276.48	286.63
Stone, clay, and glass products	385.12	401.94	406.39	409.16	406.81	406.14	404.62	392.85	393.09	404.91	411.60	415.52	418 20	417.92	417.78
Primary metal industries	459.68	478.30	464.30	474.35	464.62	475.69	477.98	473.55	478.12	481.56	480.73	479.57	486.97	485.75	480.65
Blast furnaces and basic steel products	509.16	527.39	506.97	524.30	506.68	524.80	516.71	517.57	544.85	540.09	547.45	543.05	552.86	562.02	552.86
Fabricated metal products	370.27	388.33	382.53	390.40	388.22	389.87	405.23	395.11	387.44	396.34	395.24	395.79	400.48	394.54	395.24
Machinery except electrical	386.78	417.32	412.10	420.84	417.83	422.94	434.85	422.42	415.74	424.27	417.99	421.06	427.65	421.06	422.71
Electrical and electronic equipment	351.14	370.64	368.34	376.16	374.24	379.04	389.58	379.73	373.20	383.11	376.00	377.48	385.02	376.91	382.70
Transportation equipment	491.31	521.79	507.07	519.82	523.60	531 62	554.02	546.08	524.15	537.59	538.04	539.30	539.32	530.46	535.94
Motor vehicles and equipment	525.66	558.01	534.67	550.37	556.84	565.07	597.15	594.06	559.37	576.79	586.92	587.38	579.79	573.57	575.77
Instruments and related products	342.59	365.51	364.49	373.63	367.92	373.22	382.87	369.90	369.87	374.01	368.96	372.50	376.07	370.24	375.55
Miscellaneous manufacturing	266.27	277.38	274.09	279.18	279.89	280.99	285.68	279.08	276.82	282.24	280.86	285.38	286.10	281.78	287.23
Nondurable goods	318.35	331.45	331.45	335.07	332.54	337.39	342.00	336.73	333.68	338.37	337.26	339.55	342.54	341.91	344.20
Food and kindred products	323.51	333.52	334.03	336.51	330.74	337.20	342.23	334.96	331.89	335.23	336.73	343.20	340.29	342.86	342.95
Tobacco manufactures	388.21	438 40	428.06	416.59	420.82	480.78	433.40	424.85	442.50	452.40	424.38	469.32	483.69	440.57	473.10
Textile mill products	249.67	257.75	256.86	256.10	253.11	257.42	258.86	257.01	254.10	258.96	257.28	260.52	266.93	258.90	268.93
Apparel and other textile products	194.76	202.02	201.47	203.24	203.08	203.08	206.75	205.13	202.35	206.85	203.20	205.98	209.19	205.98	206.55
Paper and allied products	423.02	448.67	449.16	456.13	453.41	460.71	466.91	456.03	451.14	454.33	458.82	460.10	463.97	465.00	468.90
Printing and publishing	342.54	356.26	357.78	363.09	359.10	364.24	366.53	359.25	358.08	362.30	360.00	358.08	358.45	360.32	367.10
Chemicals and allied products	440.13	464.25	462.45	470.40	469.66	473.89	480.82	477.24	476.10	478.68	481.01	480.17	484.99	479.13	481.22
Petroleum and coal products	582.99	586.89	583.87	597.58	590.39	596.94	584.30	597.49	594.58	601.77	595.56	583.80	596.52	598.77	593.53
Rubber and miscellaneous plastics products	329.60	345.69	343.21	345.28	345 28	349.44	355.32	352.34	343.44	347.71	346.83	345.61	350.20	347.13	343.85
Leather and leather products	203.87	209.76	206.75	208.57	207.64	210.82	215.18	207.64	207.28	212.43	215.50	218.04	221.54	217.67	219.21
TRANSPORTATION AND PUBLIC UTILITIES	420.81	437.73	441.86	447.68	438.26	444.38	445.56	438.01	440.66	441.73	441.78	441.73	449.40	451.79	455.20
WHOLESALE TRADE	329.18	345.86	347.65	351.53	348.30	351.40	357.49	351.74	352.20	353.82	354.82	357.59	360.99	359.29	357.20
RETAIL TRADE	171.05	176.40	178.09	176.40	174.64	176.12	179.65	173.73	174.31	175.52	175.22	177.91	179.39	180.58	179.97
FINANCE, INSURANCE, AND REAL ESTATE	263.90	278.13	275.55	284.02	279.96	280.64	285.53	282.83	286.47	286.47	285.74	284.23	291.77	286.47	286.47
SERVICES	239.04	250.59	249.48	253.22	252.12	254.08	257.94	254.80	256.56	256.56	257.21	[c]257.68	261.03	259.38	260.17

[1] Not available.

p = preliminary.

c = corrected.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

17. Indexes of diffusion: industries in which employment increased, seasonally adjusted

[In percent]

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1983	52.2	45.9	59.7	70.0	68.9	63.0	72.7	69.5	73.2	74.1	66.8	68.9
	1984	67.3	72.7	66.8	67.3	60.5	64.3	65.7	58.1	48.4	66.5	55.1	63.5
	1985	57.6	50.3	55.9	44.6	50.3	47.0	p51.4	p59.7	....	....	....	....
Over 3-month span	1983	46.2	53.2	63.0	73.5	71.9	73.8	72.7	80.3	80.8	78.6	74.6	74.3
	1984	78.1	75.9	77.6	68.9	69.7	67.0	65.4	60.3	60.0	56.5	67.0	60.0
	1985	58.6	54.1	46.8	45.9	44.1	p48.9	p50.8	....	....	....	....	....
Over 6-month span	1983	50.0	62.4	65.7	67.8	74.3	78.4	79.7	79.5	78.9	79.2	79.7	78.4
	1984	79.2	77.8	77.3	75.4	69.2	64.9	63.2	64.1	67.0	59.7	57.6	60.3
	1985	52.2	49.5	44.3	p43.5	p45.9	....	....	....	....	....	....	....
Over 12-month span	1983	48.6	55.1	61.4	68.6	72.4	75.1	77.0	79.7	78.4	80.8	81.6	81.1
	1984	81.9	78.4	76.8	75.1	72.7	73.0	70.0	65.7	63.5	60.5	56.2	51.9
	1985	p49.7	p50.0	....	....	....	....	....	....	....	....	....	....

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

UNEMPLOYMENT INSURANCE DATA

NATIONAL UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from monthly reports of unemployment insurance activity prepared by State agencies. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under State programs, Unemployment Compensation for Ex-Servicemen, and Unemployment Compensation for Federal Employees, and the Railroad Insurance Act. The total may include persons receiving Federal–State Extended Benefits.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed. Persons not covered by unemployment insurance (about 10 percent of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

Average weekly seasonally adjusted insured unemployment data are computed by BLS' Weekly Seasonal Adjustment program. This procedure incorporated the X–11 Variant of the Census Method II Seasonal Adjustment program.

An **application** for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year. **Number of payments** are payments made in 14-day registration periods. The **average amount of benefit payment** is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments. However, **total benefits** paid have been adjusted.

18. Unemployment insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1984						1985						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.r	Mayr	Junep	Julyp
All programs:													
Insured unemployment	2,327	2,184	2,083	2,149	2,441	2,778	3,361	3,339	3,113	2,766	2,455	2,337	. .
State unemployment insurance program:[1]													
Initial claims[2]	1,767	1,459	1,260	1,758	1,825	2,074	2,610	1,662	1,507	1,633	1,486	1,419	. . .
Insured unemployment (average weekly volume)	2,270	2,129	2,023	2,072	2,355	2,691	3,264	3,239	3,016	2,680	2,385	2,274	. . . .
Rate of insured unemployment	2.6	2.5	2.3	2.4	2.7	3.1	3.7	3.6	3 4	3 0	2.6	2.5	. . . .
Weeks of unemployment compensated	8,380	8,716	7,209	8,092	8,421	9,211	12,382	11,759	11,680	10,804	10,010	8,271	. . . .
Average weekly benefit amount for total unemployment	$119.83	$120.24	$122.49	$123.19	$123.95	$125.36	$126.68	$127.28	$128.98	$127.55	$126.33	$125.73	. . . .
Total benefits paid	$974,135	$1,017,804	$853,424	$962,856	$1,005,727	$1,114,781	$1,505,278	$1,450,239	$1,423,315	$1,333,715	$1,223,008	$1,008,462	. . .
State unemployment insurance program:[1] (Seasonally adjusted data)													
Initial claims[2]	1,661	1,618	1,707	1,746	1,765	1,602	1,766	1,814	1,709	1,714	1,746	1,683	. . .
Insured unemployment (average weekly volume)	2,457	2,355	2,567	2,461	2,551	2,541	2,532	2,585	2,614	2,648	2,500	2,541	. . . .
Rate of insured unemployment	2.8	2.7	3.0	2.8	2.9	2.9	2.8	2.9	2.9	2.9	2.8	2.8	. . .
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	13	14	13	15	13	12	14	12	12	11	10	10	. .
Insured unemployment (average weekly volume)	18	19	20	21	22	23	24	22	21	19	17	16	. . . .
Weeks of unemployment compensated	71	79	72	86	87	88	102	86	82	76	74	62	. . .
Total benefits paid	$9,573	$10,715	$9,820	$11,766	$11,984	$11,930	$13,901	$11,720	$11,193	$10,437	$10,173	$8,644	. .
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	12	10	9	15	12	11	14	9	8	9	8	10	. . .
Insured unemployment (average weekly volume)	20	19	19	21	23	24	27	26	24	20	17	17	. . .
Weeks of unemployment compensated	80	83	69	85	89	94	113	101	101	86	73	63	. . . .
Total benefits paid	$9,489	$9,776	$8,198	$10,088	$10,830	$11,386	$14,017	$12,847	$12,786	$11,166	$9,310	$7,911	. . .
Railroad unemployment insurance:													
Applications	25	7	6	9	10	11	13	4	3	3	3	12	31
Insured unemployment (average weekly volume)	16	17	18	21	26	29	31	34	34	23	16	17	21
Number of payments	35	37	34	46	52	61	94	74	75	64	43	35	39
Average amount of benefit payment	$189.06	$197.85	$196.15	$195 20	$198 85	$205 26	$206.99	$209.76	$209.66	$198 24	$190.11	$187.14	$190.84
Total benefits paid	$6,691	$6,695	$6,349	$8,596	$9,578	$12,241	$19,108	$15,361	$15,037	$12,710	$8,060	$6,000	. . . .
Employment service:[5]													
New applications and renewals	. . .	. . . .	4,803	. . . .	. . .	6,728	. . . .	. . . .	10,099	. . .	. . .	12,532	. . . .
Nonfarm placements	. . . .	. . . .	1,182	. . . .	. . . .	1,577	. . .	. . . .	2,238	. . . .	. . . .	2,740	. . . .

[1] Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

[2] Excludes transition claims under State programs.

[3] Excludes data on claims and payments made jointly with other programs.

[4] Excludes data or claims and payments made jointly with State programs.

[5] Cumulative total for fiscal year (October 1–September 30). Data computed quarterly.

r = revised.

p = preliminary.

NOTE: Data for Puerto Rico and the Virgin Islands included. Dashes indicate data not available.

PRICE DATA

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period (1967 = 100, unless otherwise noted).

Definitions

The Consumer Price Index is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. It introduced a CPI for All Urban Consumers, covering 80 percent of the total noninstitutional population, and revised the CPI for Urban Wage Earners and Clerical Workers, covering about half the new index population. The All Urban Consumers index covers in addition to wage earners and clerical workers, professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Data are collected from more than 24,000 retail establishments and 24,000 tenants in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972–73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

Though the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. Area indexes do not measure differences in the level of prices among cities. They only measure the average change in prices for each area since the base period.

Producer Price Indexes measure average changes in prices received in primary markets of the United States by producers of commodities in all stages of processing. The sample used for calculating these indexes contains about 2,800 commodities and about 10,000 quotations per month selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (that is, finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use or material composition.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States, from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. The detailed data are aggregated to obtain indexes for stage of processing groupings, commodity groupings, durability of product groupings, and a number of special composite groupings.

Price indexes for the output of selected SIC industries measure average price changes in commodities produced by particular industries, as defined in the *Standard Industrial Classification Manual 1972* (Washington, U.S. Office of Management and Budget, 1972). These indexes are derived from several price series, combined to match the economic activity of the specified industry and weighted by the value of shipments in the industry. They use data from comprehensive industrial censuses conducted by the U.S. Bureau of the Census and the U.S. Department of Agriculture.

Notes on the data

Regional CPI's cross classified by population size were introduced in the May 1978 *Review*. These indexes enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes are published bimonthly. (See table 21.)

For details concerning the 1978 revision of the CPI, see *The Consumer Price Index: Concepts and Content Over the Years,* Report 517, revised edition (Bureau of Labor Statistics, May 1978).

As of January 1976, the Producer Price Index incorporated a revised weighting structure reflecting 1972 values of shipments.

Additional data and analyses of price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes,* both monthly publications of the Bureau.

For a discussion of the general method of computing producer, and industry price indexes, see *BLS Handbook of Methods,* Bulletin 2134–1 (Bureau of Labor Statistics, 1982), chapter 7. For consumer prices, see *BLS Handbook of Methods for Surveys and Studies* (1976), chapter 13. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review,* April 1978. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review,* August 1965.

19. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–84

[1967 = 100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4 1	112.7	5.1	120.6	6.3	116.7	5.1	115.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.3	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128 1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	6.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4
1979	217.7	11.5	228.7	10.9	227.5	12.3	166.4	4.3	212.8	14.5	240.1	9.4	187.6	6.5	196.3	7.2
1980	247.0	13.5	248.7	8.7	263 2	15.7	177.4	6.6	250.5	17.7	267.2	11.3	203.7	8.5	213.6	8.8
1981	272.3	10.2	267.8	7.7	293.2	11.4	186.6	5.2	281.3	12.3	295.1	10.4	219.0	7.5	233.3	9.2
1982	288.6	6.0	278.5	4.0	314.7	7.3	190.9	2.3	293.1	4.2	326.9	10.8	232.4	6.1	257.0	10.2
1983	297.4	3.0	284.7	2.2	322.0	2.3	195.6	2.5	300.0	2.4	355.1	8.6	242.4	4.3	286.3	11.4
1984	307.6	3.4	295.2	3.7	329.2	2.2	199.1	1.8	313.9	4.6	377.7	6.4	251.2	3.6	304.9	6.5

20. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
All items	311.7	317.4	318.8	320.1	321.3	322.3	322.8	307.5	313 9	315.3	316.7	317.8	318.7	319.1
Food and beverages	295.3	301.4	301 6	301.6	301.0	301.4	301 6	295.3	301.2	301.6	301.2	300.8	301.2	301.4
Housing	338.1	343.3	344.7	345.9	348 5	350 4	351.6	328.7	337.2	338.2	339 5	342.1	344.0	345.0
Apparel and upkeep	196.6	201.8	205.3	205.9	205 3	204.6	202.8	195 3	200.7	204.2	204 9	204.2	203.7	201.8
Transportation	312.9	314.3	316.7	320.0	321.4	321.8	321.8	315.2	316.3	318.7	322.0	323.3	323.6	323.5
Medical care	380.3	393.8	396 5	398 0	399.5	401.7	404.0	378.5	392.0	394 6	396 1	397.7	399.8	402.0
Entertainment	255.3	261.3	262.2	263 3	263.6	264.8	265.7	251.4	256.9	257 3	258.6	258.8	260.1	260.9
Other goods and services	306.5	320.5	321.1	321 8	322.3	323.0	325.0	304.5	317.1	317.6	318.3	318.8	319.5	321.8
Commodities	280.6	284.0	285.3	286.8	287.0	286 9	286 5	280.1	283.5	285.2	286.7	286.8	286.8	286.4
Commodities less food and beverages	269.0	270.7	272.8	275.1	275.6	275.4	274.6	268.8	271.1	273.1	275.5	276.0	275.8	275.0
Nondurables less food and beverages	274.3	274.7	277.9	281.5	283.1	283.5	282 9	276 2	276.2	279 4	283.2	284.9	285 4	285.0
Durables	267.8	271.4	271.9	272.6	271.6	270.4	269.3	261.3	266.2	266.7	267.3	266.3	265.1	263.8
Services	364.5	373.5	375.0	376.2	378.9	381.3	383.3	358.2	369 6	371.0	372.2	374.9	377.4	379.2
Rent, residential	249.7	258.4	259.2	260.4	262.6	263 6	265 0	249.0	257.5	258.4	259.6	261.8	262.7	264.1
Household services less rent of shelter (12/82 = 100)	109.7	108.9	111.5	109 8	110.9	112.7	113.2	....	100.4	101.1	101.2	102.2	104.2	104.5
Transportation services	321.4	332.2	333.2	334.1	334 5	335.3	337.0	319.6	328.1	328 8	329.6	329 9	330.6	332.2
Medical care services	410.9	425.3	428 1	429.4	403.9	433.0	435.8	418.4	423.1	425.7	427.1	428.7	430.7	433.3
Other services	294.2	307.8	308.6	309.9	310.7	312.0	313.0	292.8	304.2	304.9	306.2	307.2	308.4	309.3
Special Indexes:														
All items less food	312.0	317.4	319.1	320.8	322.4	323.6	324.2	307.3	313.7	315.4	317.2	318.7	319.8	320.3
All items less homeowners' costs	106.5	108.2	108 7	109.2	109.5	109.8	109.9	...	100.5	101.0	101.4	101.7	102.0	102.0
Commodities less food	266 8	268.6	270.6	272 8	273.4	273.1	272.4	267 8	269 0	271.0	273.3	273.8	273.6	272.8
Nondurables less food	269.5	270.2	273.2	276 5	278.0	278.4	277.9	271 8	271.7	274.7	278.2	279 8	280.4	280.0
Nondurables less food and apparel	311.9	310.8	313 5	318.1	320.7	321.7	321.9	312 2	311.5	314.4	319.1	321.8	322 9	323.2
Nondurables	286 0	289 6	291.0	292.7	293.3	293 7	293 5	287.8	289.8	291.6	293.4	294.0	294.4	294.3
Services less rent of shelter (12/82 = 100)	109.0	111.3	111 9	112.2	112.8	113.7	114.2	....	100.7	101.2	101.4	101.9	102.8	103.3
Services less medical care	357.1	365 5	366 9	368 1	370.9	373.3	375.2	350.5	361 6	362 8	364.1	366 8	369.3	371.1
Domestically produced farm foods	279.0	284.8	284.2	283 3	281 9	281 8	282.3	277.4	282 9	282.5	281.6	280.1	280.0	280.5
Selected beef cuts	271.9	275.2	275.0	273.3	268.6	266 9	264.0	272.8	276.5	276.6	274.8	270.1	268.4	265.2
Energy	428 3	411.4	416 6	424 4	431.7	436.8	437.1	427.8	410.6	416.0	424.2	431.3	436 9	437.2
Energy commodities	408.9	391.3	398.3	410.8	417.0	418.7	418 1	409.5	391.8	399.0	411.6	418.0	419.9	419.6
All items less energy	303.1	310.9	312 0	312.7	313.3	313 9	314.5	297.8	306.4	307 4	308.1	308.6	309.1	309.5
All items less food and energy	301.3	309 5	310.8	311.8	312.8	313.4	314.1	295 1	304.3	305.5	306.4	307.3	307.8	308.3
Commodities less food and energy	253.0	258 1	259 3	260.0	259 6	259 0	258.2	250 1	255.5	256.6	257.2	256.8	256.2	255.3
Services less energy	356.8	368.0	369 4	370.7	372.9	374.6	376.6	349.7	363.6	364.9	366.2	368.4	369.9	371.9
Purchasing power of the consumer dollar, 1967 = $1	$0.321	$0.315	$0.314	$0 312	$0 311	$0.310	$0.310	$0.322	$0.319	$0.317	$0.316	$0.315	$0.314	$0.313

20. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
FOOD AND BEVERAGES	295.3	301.4	301.6	301.6	301.0	301.4	301.6	295.3	301.2	301.6	301.4	300.8	301 2	301 4
Food	303.2	309.5	309.7	309.6	308.9	309 3	309.5	302 8	309.0	309 3	309 2	308.4	308.8	309.0
Food at home	292.5	298.6	298.4	297.7	296.2	296.0	296.2	291.0	297.0	296 9	296.1	294.6	294.5	299.6
Cereals and bakery products	306.6	313.7	314.4	314.8	315.9	317.3	317.3	304.9	311.9	312.7	313.1	314.1	315.7	315.7
Cereals and cereal products (12/77 = 100)	164.5	167.0	168.1	168.2	169.4	169.8	170.2	165.2	167.5	168.7	168.8	169.9	170.5	170.9
Flour and prepared flour mixes (12/77 = 100)	147.2	148 2	148.9	147.5	150.7	151.8	152.2	147.5	148.4	149.1	147.8	150.9	152.2	152.5
Cereal (12/77 = 100)	185.7	191 9	193.0	193.9	194.6	194.7	144.6	188.0	194.1	195.2	196.2	197.0	197.1	197 1
Rice, pasta, and cornmeal (12/77 = 100)	150.3	149 0	150.5	150.7	150.7	151.1	152.2	151.4	150.2	151.7	151.9	151.8	152.2	153.4
Bakery products (12/77 = 100)	161.5	165.6	165.7	166.0	166.4	167.3	167.1	160.1	164.2	164.4	164.7	165.0	165.9	165.8
White bread	260.9	267.1	266.8	266.2	265.2	267.7	267.5	256.6	262 8	262 5	261.9	260 8	263.6	263.2
Other breads (12/77 = 100)	155 7	158 1	158.6	160.2	159.9	160.4	159.8	157.8	160.5	161.0	162.7	162.3	162.8	162.2
Fresh biscuits, rolls, and muffins (12/77 = 100)	158 7	164.1	163 3	161.4	162.1	163.5	162.4	154.6	159.7	158.8	157.3	157.8	159.2	158.0
Fresh cakes and cupcakes (12/77 = 100)	163.9	168.9	169.4	169.9	171.2	170.4	170.6	161.8	166.8	167.4	168.0	169.0	168.4	168.5
Cookies (12/77 = 100)	166 1	171.5	171.9	172.2	173.2	174.3	175.0	167.1	172.5	172.9	173.2	174.2	175.2	176.1
Crackers, bread, and cracker products (12/77 = 100)	160.7	167.9	168 6	170.3	172.0	172.9	173.2	162.0	169.2	170.2	171.9	173.6	174.7	175.1
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	163.0	165.0	163 8	165.0	165.4	166.5	165.4	165.6	167.7	166.9	167.9	168.3	169.5	168.3
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	169.0	172.4	174.2	174.8	175.7	176.0	176.4	162.1	164.9	166.8	167.2	168 3	168.5	169.1
Meats, poultry, fish, and eggs	264 6	267.0	266 1	263 6	259.8	259 8	260.4	263.9	266.3	265.6	262.9	259.2	259.3	259.7
Meats, poultry, and fish	271.4	274.8	273.7	271.2	267 8	268.0	268.0	270.4	274.0	273.0	270.3	267.1	267.3	266.9
Meats	267 3	270.6	269.5	266 4	263.4	263.0	262.7	266.6	270.0	268 9	265.7	262.9	262.5	262.0
Beef and veal	272.1	275 6	275.3	273.7	269.0	267.4	264.7	272.4	276.2	276.2	274.4	269 8	268.1	265.1
Ground beef other than canned	253.0	256 5	256.4	256.1	249.1	246.7	244.6	253.7	257.7	257.7	257.4	250.4	247.9	245.8
Chuck roast	269.1	284.7	280.0	275.1	266.2	261.1	257.9	277.3	293.9	288.9	283.6	274.2	270.0	266.8
Round roast	231.4	239.2	240.2	238.8	232.9	226 8	226.7	235.1	242.2	244.2	242.5	236.4	230 6	230.0
Round steak	250.6	258 4	257.1	255.4	251.4	248.1	242.2	247.7	256.4	254.5	252.1	249.0	245.7	238.8
Sirloin steak	286 5	272.6	274.7	273.5	272.8	284.1	280.0	288.4	273.7	276 3	274.5	276.0	286 2	282.5
Other beef and veal (12/77 = 100)	170.5	170 9	171.1	170.2	169.0	168.6	166.9	169.1	169.5	170.0	169.1	167.9	167.5	165.5
Pork	255.5	258.9	256.5	249.0	247.8	248.6	253.1	254.8	258.0	255.8	248.2	246.9	248.0	252.1
Bacon	272.4	278.9	278.6	277.8	274.8	271.6	281.0	276.3	282.6	282.2	281.8	278.7	275.3	284 6
Chops	242.4	240.5	233.7	226.1	223.1	227.0	233.5	240.1	238.5	232.1	224.5	221.0	225.3	231.5
Ham other than canned (12/77 = 100)	111.4	118.0	119.5	108.2	109.5	111.1	112.0	108.3	114.9	116.5	105.5	106.7	108.4	109.1
Sausage	322.0	321.9	320.2	316.2	318.4	316.3	317.4	322.9	322.1	320.3	315.9	318.1	316.3	317.4
Canned ham	246.5	258.2	257.4	250.2	252.8	249.9	248.2	252.0	262.9	261.9	254.3	257.3	254.7	252.7
Other pork (12/77 = 100)	142.0	139.8	137.3	135.9	133.2	134.4	137.2	141.1	139.1	136.6	135.2	132.5	133.8	136.4
Other meats	268.0	270.5	268 6	269.1	268.3	269.6	268.2	267.5	269.6	267.8	268.2	267.6	268.8	267.2
Frankfurters	265.3	269.2	266.9	267.8	264.9	264.8	261.5	263.8	268.0	265.7	266.0	263.1	263.6	259.5
Bologna, liverwurst, and salami (12/77 = 100)	154.8	156.8	156.4	158.2	157.5	157.0	157.6	154.8	156.6	156.4	158.2	157.5	156.9	157.5
Other lunchmeats (12/77 = 100)	138.2	138.2	137.0	136.4	136.9	137.9	137.0	136.4	136.2	134.9	134.4	135.0	135.8	135.0
Lamb and organ meats (12/77 = 100)	139.0	141.1	140.2	140.1	139.6	141.9	141.3	142.0	143.6	142.7	142.4	142.6	144.8	144.0
Poultry	221.3	219.5	217.3	216.7	213.6	216.0	214.7	218.8	217.0	214.8	214.4	211.1	219.7	212.1
Fresh whole chicken	228.1	216.5	215.7	215.0	209.2	213.7	211.8	225.4	214.0	213.2	212.7	207.0	211.5	209.1
Fresh and frozen chicken parts (12/77 = 100)	146.6	143 3	140.9	140.3	139.7	140.1	140.1	144.4	141.3	138.8	138.3	137.6	138.0	137.8
Other poultry (12/77 = 100)	132.7	143.2	141.6	141.6	140.5	141.5	140.3	131.5	142.3	140.7	140.8	139.3	140.5	139.4
Fish and seafood	387.0	401.4	403.3	402.8	393.8	397.2	402.7	385.5	401.2	403.1	401.9	394.9	396 4	400.9
Canned fish and seafood	134.4	133 5	133.7	133.0	134.0	133.6	133.2	133.9	133.2	133.3	132 8	133.7	139.2	132.8
Fresh and frozen fish and seafood (12/77 = 100)	155.1	164 3	165.4	165.5	160.7	161.8	165.4	154.8	164.9	166.0	165.6	160.7	161.9	165.0
Eggs	182.7	169.7	172.1	169.9	159.9	158.3	168.4	183.7	170.2	172.7	170.6	160.5	158.9	169.1
Dairy products	252.2	259.2	258.9	258.3	258.4	257.8	257.8	257 1	258.3	257.8	257.2	257.3	256.7	256.6
Fresh milk and cream (12/77 = 100)	136.7	140 7	140.6	140.2	139.8	139.8	139.1	136.0	140.0	139.8	139.4	139.1	139.0	138.3
Fresh whole milk	223.3	229.8	229.7	229.1	228.7	228.7	227.4	222.2	228.7	228.5	227.9	227.4	227.4	226.1
Other fresh milk and cream (12/77 = 100)	137.5	141.5	141.2	140.8	140.1	139.9	139.5	136.8	140.8	140.5	140.1	139.4	139.1	138.7
Processed dairy products	150.8	154.8	154.4	154.2	154.9	154.2	155.1	151.0	155.1	154.7	154.4	155.2	154.4	155.4
Butter	261.2	264.9	263.9	259.2	262.6	262.8	262.6	263.8	267.6	266.6	262.0	265.1	265.5	268.4
Cheese (12/77 = 100)	147.9	150.8	150.5	149.9	150.7	150.0	151.3	148.2	151.3	150.9	150.3	151.1	150.2	151.6
Ice cream and related products (12/77 = 100)	155.8	162.6	162.1	162.4	162.9	161.9	162.5	154.8	161.7	161.1	161.4	161.9	160.8	161.4
Other dairy products (12/77 = 100)	148.3	153.0	152.8	154.7	155.0	154.2	155.2	148.6	153.4	153.2	155.0	155.4	154.4	155.5
Fruits and vegetables	320.0	333.0	332.1	333.2	330.3	329.0	328.9	315.1	327.1	326.8	328.1	324.8	323.5	323.9
Fresh fruits and vegetables	332.4	354.1	352.1	353.5	346.9	343.9	343.1	325.2	344.9	344.2	346.1	338.7	335.7	336.0
Fresh fruits	346.9	362.6	362.9	367.2	381.9	380.8	370.0	333.5	347.0	348.3	353.7	367.1	365.9	356.7
Apples	329.9	318.5	321.4	328.8	333.9	342.7	347.9	330.6	319.5	322.4	329.7	336.4	346.5	351.0
Bananas	271.8	268.9	281.6	301.2	277.0	285.7	249.1	269.5	267.9	281.0	300.1	276.0	283.9	247.6
Oranges	486 5	448 6	437.4	444.3	484.8	473.1	474.7	448.5	408.7	399.0	407.4	442.6	430.0	436.3
Other fresh fruits (12/77 = 100)	163.6	193.0	193.2	191.7	201.9	199.8	191.6	157.0	184.6	185.4	184.8	194.6	192.1	184.6
Fresh vegetables	318.8	346.3	342.0	340.8	314.3	309.5	317.9	317.8	343.2	340.7	339.5	313.2	308.6	317.5
Potatoes	455.6	335.7	338.3	342.9	369.4	399 4	384.9	451 1	327.5	331.0	335.8	362.3	393.8	380.3
Lettuce	246.0	339.7	306.7	263.5	295.5	243.0	297.5	246 2	341.7	311.9	266.9	301.6	246.0	301.8
Tomatoes	237.3	282.4	322.4	410.0	232.9	218 9	232.4	242.1	285.6	326.0	413.5	234.7	220.1	235.1
Other fresh vegetables (12/77 = 100)	167.1	205.0	199.5	191.5	175.0	174.9	174.9	166.1	202.8	198.0	190.5	174.1	174.7	174.3
Processed fruits and vegetables	309.2	312.7	313.0	313.8	315.0	315.5	316.1	306.5	309.9	310.0	310.5	312.0	312.5	313.1
Processed fruits (12/77 = 100)	163.6	166.9	167.6	168.5	168.7	168.9	169.3	163.1	166.4	166.9	167.9	168.1	168.3	168.8
Frozen fruit and fruit juices (12/77 = 100)	163.9	170.0	172.3	173.3	174.4	173.6	172.1	163.1	169.3	171.4	172.6	173.7	172.8	171.3
Fruit juices other than frozen (12/77 = 100)	165.7	170.1	169.9	171.1	170.6	172.4	173.1	164.8	169.1	168.7	170.1	169.6	171.3	172.1
Canned and dried fruits (12/77 = 100)	161.2	160 9	161.3	161.6	161.7	161.3	162.9	161.4	161.1	161.3	161.7	161.9	161.3	163 0

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
Fruits and vegetables—Continued														
Processed vegetables (12/77 = 100)	147.2	147.5	147.1	147.1	148.1	148.4	148.6	146.0	146.4	146.0	145.9	146.9	147.2	147.4
Frozen vegetables (12/77 = 100)	155.1	159.6	159.0	160.0	161.0	161.1	162.7	156.7	161.6	160.9	162.0	163.1	163.1	164.8
Cut corn and canned beans except lima (12/77 = 100)	152.3	150.0	150.2	149.7	150.6	150.6	150.8	149.7	147.4	147.5	147.1	147.9	147.9	148.3
Other canned and dried vegetables (12/77 = 100)	140.6	140.1	139.6	139.2	140.2	140.8	140.3	138.9	138.5	138.1	137.6	138.6	139.2	138.6
Other foods at home	353.1	359.8	360.5	360.8	361.3	360.8	360.6	353.5	360.2	361.0	361.3	361.6	361.3	361.1
Sugar and sweets	391.8	394.8	394.8	396.1	397.6	398.3	400.2	391.1	394.4	394.2	395.5	396.9	398.0	399.8
Candy and chewing gum (12/77 = 100)	161.3	162.9	163.4	164.2	164.5	165.6	165.8	161.0	162.7	163.2	164.1	164.3	165.7	165.7
Sugar and artificial sweeteners (12/77 = 100)	171.0	171.5	170.8	169.3	170.1	169.6	171.2	172.2	172.8	172.0	170.6	171.3	171.0	172.6
Other sweets (12/77 = 100)	159.4	160.9	160.6	162.7	164.0	163.3	164.6	157.0	158.4	158.1	160.3	161.4	160 8	162 1
Fats and oils (12/77 = 100)	291.4	295.1	294.9	294.0	294.0	296.0	297.8	291.0	294.7	294.3	293.7	293 6	295.6	297 3
Margarine	293.2	296.8	297.6	297.0	298.8	301.9	307.2	291.1	294.0	294.5	294.4	296.0	298 6	304 5
Nondairy substitutes and peanut butter (12/77 = 100)	153.2	159.7	159.9	160.0	159.6	159.3	160.0	151.3	157.6	157.7	158.1	157 8	157.4	158 0
Other fats, oils, and salad dressings (12/77 = 100)	152.7	152.8	152.3	151.6	151.2	152.6	152.5	153.2	153.5	153.0	152.3	151 9	153 3	153 3
Nonalcoholic beverages	442.7	452.7	454.0	454.0	454.1	451.5	448.2	444.0	454.2	455.5	455.6	455 4	453 0	449.8
Cola drinks, excluding diet cola	315.1	325.9	326.4	325.5	324.9	321.2	317.8	312.4	323.2	323.6	322.7	322 0	318 6	315 4
Carbonated drinks, including diet cola (12/77 = 100)	150.5	149.8	149.7	150.3	151.2	150.5	148.5	148.1	147.4	147.4	148.3	149 0	148 4	146 5
Roasted coffee	374.8	379.5	381.4	378.9	379.9	380.5	379.7	369.0	373.3	375.2	372 8	373 9	374 8	373 9
Freeze dried and instant coffee	366.9	375.5	376.5	378.9	380.0	380.9	380 0	366.3	374.5	375.6	378.0	378 9	380 0	379 3
Other noncarbonated drinks (12/77 = 100)	147.4	152.4	153.6	153.8	153.1	152.7	152.7	147.7	152.7	154.0	154.1	153 4	153 1	153 2
Other prepared foods	285.4	291.5	292.2	292.8	293.4	293.4	294.5	287.0	292.9	293.7	294.2	294 9	295 0	296 1
Canned and packaged soup (12/77 = 100)	145.6	150.7	149.8	150.7	151.4	151.8	154.0	147.6	152.5	151.7	152 6	153 1	153 6	155 8
Frozen prepared foods (12/77 = 100)	159.1	165.3	165.7	165.8	164.7	164.8	165.0	158.3	164.0	164.4	164 8	163 5	163 8	163 9
Snacks (12/77 = 100)	166.0	169.5	169.5	169.3	170.3	170.1	171.1	168.3	172.0	171.9	171.8	172.8	172 5	173 6
Seasonings, olives, pickles, and relish (12/77 = 100)	163.8	168.1	168.0	167.9	168.5	166.6	167.0	162.9	167.1	167.1	166 8	167 4	165 8	166 3
Other condiments (12/77 = 100)	160.0	161.1	161.6	162.6	163.5	164.6	165.6	161.9	162.9	163.4	164.3	165 3	166 4	167 4
Miscellaneous prepared foods (12/77 = 100)	154.9	157.1	159.6	159.7	160.6	160.6	160.5	154.9	157.1	159.7	159.8	160.5	160 7	160 6
Other canned and packaged prepared foods (12/77 = 100)	151.6	153.6	153.6	153.9	153.7	153.5	153.6	152.8	154.9	154.9	155.1	155.0	154 8	155 0
Food away from home	334.4	341.4	342.6	343.9	345.1	346.9	347.3	332.7	344.6	345.8	347.1	348 4	350.1	350.4
Lunch (12/77 = 100)	161.5	164.9	165.5	165.9	166.4	167.0	167.1	163.0	166.5	167.0	167.4	168.0	168 5	168 7
Dinner (12/77 = 100)	161.0	164.7	165.3	166.1	166.6	167.8	168.0	162.8	166.6	167.2	168.0	168 5	169.6	169 9
Other meals and snacks (12/77 = 100)	165.5	168.1	168.8	169.7	170.4	171.3	171.3	166.0	168.6	169.3	170.1	170 8	171 7	171 7
Alcoholic beverages	222.5	225.8	226.5	226.7	227.7	227.8	227.8	225.8	229.1	229.9	229.9	230.8	231.0	231.0
Alcoholic beverages at home (12/77 = 100)	142.8	144.3	144.8	144.7	145.2	145.3	145.2	145.0	146.5	147.1	146.9	147 4	147.4	147.4
Beer and ale	231.5	234.5	235.9	235.4	235.7	236.3	236.5	230.6	233.4	234.7	234.2	234.5	234 9	235.2
Whiskey	153.5	154.8	154.9	154.7	155.6	155.3	155.0	153.9	154.7	154.9	154.6	155.5	155 3	154.8
Wine	232.5	234.4	234.2	234.9	236.5	235.2	235.1	240.1	242.0	241.8	242.6	244 4	243.5	242 9
Other alcoholic beverages (12/77 = 100)	122.7	124.3	124.5	124.7	125.1	125.5	125.4	122.4	123.7	124.2	124.4	124.8	125 2	125.1
Alcoholic beverages away from home (12/77 = 100)	155.5	160.2	160.4	161.5	162.8	162.9	163.3	156.6	161.5	161.8	162.7	163.8	164.0	164.3
HOUSING	338.1	343.6	344.7	345.9	348.5	350.4	351.6	328.7	337.2	338.2	339.5	342.1	344.0	345.0
Shelter (CPI–U)	362.1	373.3	374.3	375.9	379.5	381.0	383.2	. .	. .	. .	. .	. .	. .	.
Renters' costs	108.9	112.4	112.9	113.5	119.5	115.1	115.8	. .	. .	. .	. .	. .	. .	. .
Rent, residential	249.7	258.4	259.2	260.4	267.6	263.6	265 0	. .	. .	. .	. .	. .	. .	. .
Other renters' costs	375.7	381.9	386.1	390.9	396.5	401.6	405.1	. .	. .	. .	. .	. .	. .	. .
Homeowners' costs	106.2	110.7	110.8	111.3	112.4	112.8	113.5	. .	. .	. .	. .	. .	. .	. .
Owners' equivalent rent	107.7	110.7	110.9	111.3	112.5	112.8	113.5	. .	. .	. .	. .	. .	. .	. .
Household insurance	106.7	109.5	110.4	111.4	112.0	112.7	112.7	. .	. .	. .	. .	. .	. .	. .
Maintenance and repairs	360.3	366.8	370.0	368.0	366.2	367.6	367 8	. .	. .	. .	. .	. .	. .	. .
Maintenance and repair services	411.6	415.8	422.2	418.2	416.0	423.2	421.1	. .	. .	. .	. .	. .	. .	. .
Maintenance and repair commodities	263.1	270.5	270.6	270.4	264.2	265.7	267.8	. .	. .	. .	. .	. .	. .	. .
Shelter (CPI–W)	. .	. .	. .	. .	. .	. .	. .	347 9	362 0	363 0	364.7	368 1	369 5	371 5
Rent, residential	. .	. .	. .	. .	. .	. .	. .	249.0	257 5	258 4	259 6	261 8	262 7	264 1
Other renters' costs	. .	. .	. .	. .	. .	. .	. .	375 1	380 8	385 3	391.0	396 7	401 0	405 2
Lodging while out of town	. .	. .	. .	. .	. .	. .	. .	400.6	397 8	404 3	412 8	421 6	427 6	434 1
Tenants' insurance (12/77 = 100)	. .	. .	. .	. .	. .	. .	. .	160 4	164 2	166.2	167 5	168.1	169 0	169 2
Maintenance and repairs	. .	. .	. .	. .	. .	. .	. .	357 3	361 5	364 3	363 1	361.8	362 9	363.4
Maintenance and repair services	. .	. .	. .	. .	. .	. .	. .	405.2	408 8	414 8	411.7	410 1	417 0	415 3
Maintenance and repair commodities	. .	. .	. .	. .	. .	. .	. .	257.1	261.1	261.6	261 6	260.7	258 4	260.0
Paint and wallpaper, supplies, tools, and equipment (12/77 = 100)	. .	. .	. .	. .	. .	. .	. .	147.2	152.2	152 1	151 8	151 2	147 6	149 6
Lumber, awnings, glass, and masonry (12/77 = 100)	. .	. .	. .	. .	. .	. .	. .	123.1	127.8	128 3	128 1	124.4	126.6	124 8
Plumbing, electrical, heating, and cooling supplies (12/77 = 100)	. .	. .	. .	. .	. .	. .	. .	142.1	143.5	146 1	145.8	145 7	145.4	146.5
Miscellaneous supplies and equipment (12/77 = 100)	. .	. .	. .	. .	. .	. .	. .	146.3	145 2	145 5	145.7	146.0	146.4	146.3

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
Fuel and other utilities	393.9	386.5	388.2	388.7	393.0	399.4	399.9	395.4	387.5	389.2	389.7	393.8	400.9	401.2
Fuels	496.5	480.8	482.2	483.0	490.0	497.7	497.3	496.1	480.3	481.6	482.3	488.9	497.7	497.0
Fuel oil, coal, and bottled gas	637.4	623 4	620.8	623.5	620.8	612.0	601.9	640.0	625.7	623.1	625.9	623.2	614.3	604.2
Fuel oil	646.2	628.4	626.3	630.1	627.0	616.9	604.9	648.8	631.3	628.7	632.5	629.5	619.3	607.3
Other fuels (6/78 = 100)	193.7	194.9	194.2	193.7	192.9	192.2	192.2	194.4	195.5	194.7	193.7	193.4	192.8	192.8
Gas (piped) and electricity	459.1	443.3	445.5	445.9	454.7	465.6	467.1	458.2	442.3	444.4	444.6	453.0	465.1	466.3
Electricity	368.7	352.6	354.2	355.7	358.4	377.6	378.5	369.0	351.7	353.2	354.6	357.4	378.2	379.1
Utility (piped) gas	589.7	576.8	580.1	578.2	598.9	590.3	592.8	585.1	574.3	577.2	575.0	594.1	586.2	588.0
Other utilities and public services	230.6	234.3	236.3	236.4	236 8	241 1	242.8	231.7	235.1	237.2	237.3	237.7	242.0	243.7
Telephone services	188.1	189 1	191.3	191.1	191.4	195.7	197.2	188.7	189.5	191.2	191.7	192.0	196.2	197.7
Local charges (12/77 = 100)	162.3	164.6	167.7	167.5	167.7	175.4	177.9	163.1	164.9	168.2	168.0	168.2	175.8	178.4
Interstate toll calls (12/77 = 100)	116.2	116.2	116.2	116.2	116.8	113.5	111.6	116.6	116.6	116.6	116.6	117.2	113.9	112.0
Intrastate toll calls (12/77 = 100)	125.9	123.9	124.3	124.2	123.9	124.4	125.9	125.7	123 9	124.2	124.2	123.8	124.3	125 9
Water and sewerage maintenance	376.6	391.3	391.4	393.2	394.2	398.5	400.3	381.0	395.0	395.1	396.8	397.9	402.5	404.5
Household furnishings and operations	241.9	246.2	246.9	247.9	247.6	247.1	246.5	238.3	242.6	243.2	244.1	244.0	249.3	242.6
Housefurnishings	197.9	200.7	200.6	201.7	201.2	200.0	198.8	195.6	198.3	198.2	199.2	198.9	197.6	196.2
Textile housefurnishings	232.9	244.5	241.4	239.5	243.2	240.6	236.2	236.4	247.9	245.2	243.0	247.2	244.2	239.5
Household linens (12/77 = 100)	136.6	146.6	142.2	140.5	143.8	140.9	137.1	137.7	147.9	143.5	141.7	144.8	141.9	138.2
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	154.2	158.6	159.3	158.7	159.9	159.7	158.0	158.6	162.3	163.8	163.0	165.1	164.5	162.4
Furniture and bedding	222.1	225.0	226.7	231.7	229.1	229.2	227.0	218.4	221.5	223.1	228.0	226.2	226.0	223.2
Bedroom furniture (12/77 = 100)	151.5	154.7	156.5	165.5	162.2	162.0	159.0	148.1	151.2	152.1	161.2	158.7	158.4	155.2
Sofas (12/77 = 100)	121.9	121.3	121 4	124.5	123.2	123.9	123.1	122.1	120.7	121.0	123.7	123.1	123.4	121.8
Living room chairs and tables (12/77 = 100)	126.3	125.9	126.7	126.9	126.7	128.2	126.6	127.2	126.9	128.1	128.1	127.9	129.1	127.5
Other furniture (12/77 = 100)	144.7	148.5	149.8	149 1	148.0	146.8	146.7	140.2	144.6	145.2	145.0	144.3	142.8	142.7
Appliances including TV and sound equipment	147.2	145.8	145.4	145.3	144.1	142.8	142.3	148.4	147.9	147.6	147.3	146.0	144.2	144.1
Television and sound equipment	101.3	99.7	99.5	99.0	97.8	96.4	96.4	100.2	98.6	98.5	97.9	96.7	95.3	95.4
Television	94.5	91.9	92.3	90.9	89.4	88.5	88.2	93.0	90.5	91.0	89.5	88.0	87.2	87.1
Sound equipment (12/77 = 100)	108.2	107.6	106.9	107.2	106.1	104.4	104.6	107.2	106.4	105.7	106.0	104.8	103.1	103.4
Household appliances	187.1	186 5	185.7	186.6	185.9	184 2	183.7	188.4	189.2	188.8	189.5	189.1	187.2	186.4
Refrigerators and home freezers	194.2	197.2	195.2	196.0	195.2	193.8	193.1	199.8	203.3	201.0	201.8	200.9	199.8	199.5
Laundry equipment	145.5	147.1	148.4	148.5	147.1	147.1	146.2	146.0	147.9	149.3	149.6	148.3	148.5	146.9
Other household appliances (12/77 = 100)	123.2	121.8	121.2	121.9	121.6	120.1	120.0	121.4	119.8	119.7	120.2	120.1	118.5	118.0
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	121.7	122.4	122.7	122.8	122.9	120.3	119.3	120.0	120.7	121.2	121.0	121.4	118.6	116.8
Office machines, small electric appliances, and air conditioners (12/77 = 100)	124.9	121.4	120.0	121.3	120.7	120.2	119.3	122.9	118.7	117.9	119.1	118.6	118.1	118.7
Other household equipment (12/77 = 100)	142.1	145.1	144.9	144 9	145.6	144.8	144.8	139.5	142.6	142.1	141.9	142.4	141.8	142.0
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	147.0	153.0	152.2	151.1	152.4	149.7	152.0	137.8	142.4	142.4	140.7	141.5	139.1	141.2
Clocks, lamps, and decor items (12/77 = 100)	135.5	137.3	135.8	136.6	138.9	137.9	137.1	130.7	133.2	131.6	132.2	134.4	134.0	133.3
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	147.2	147.0	148.3	148.2	148.4	149.1	147.4	143.3	142.4	144.8	144.1	144.4	145.2	143.8
Lawn equipment, power tools, and other hardware (12/77 = 100)	135.2	141.2	140.4	140.6	140.3	139.1	140.4	140.7	146.0	144.9	145.1	144.7	149.3	145.0
Housekeeping supplies	303.8	311.5	311.8	312.6	312.9	313.6	313.1	301.0	308.5	308.9	309.8	310.0	310.8	310.3
Soaps and detergents	299.8	309.1	308.6	309.4	309.2	310.5	309.4	295.3	304.3	303.9	304.8	304.6	305.9	304.8
Other laundry and cleaning products (12/77 = 100)	154.9	158.8	159.1	157.8	157.5	158.4	159.0	153.6	157.2	157.6	156.5	156.1	156.9	157.5
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	153.7	158.7	160.0	161.4	162.3	162.0	162.1	153.7	158.4	159.7	161.0	161.9	161.8	161.8
Stationery, stationery supplies, and gift wrap (12/77 = 100)	143.7	145.3	146.0	147.3	146.7	146.8	146.7	147.1	149.0	149.8	151.1	150.6	150.7	150.6
Miscellaneous household products (12/77 = 100)	161.2	163.9	163.9	163.6	163.8	163.7	164.3	155.9	158.4	158.6	158.2	158.5	158.3	159.0
Lawn and garden supplies (12/77 = 100)	144.9	149.8	148.6	150.0	150.5	151.5	149.3	138.7	143.9	142.4	144.3	144.8	145.7	143.1
Housekeeping services	327.6	333.9	337.4	337.9	338.0	338.3	339.8	328.2	334.9	338.5	339.0	339.2	339.5	341.0
Postage	337.5	349.4	371.9	371.9	371.9	371.9	371.9	337.5	349.8	372.7	372.7	372.7	372.7	372.7
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	174.5	180.2	181.4	182.1	182.4	182.9	185.0	174.9	180.9	182.0	182.6	182.9	183.3	185.2
Appliance and furniture repair (12/77 = 100)	150.9	155.8	156.4	156.7	156.6	156.9	158.2	148.9	153.4	154.0	154.4	154.5	154.8	155.9
APPAREL AND UPKEEP	196.6	201.8	205.3	205.9	205.3	204.6	202.8	195.3	200.7	204.2	204.9	204.2	203.7	201.8
Apparel commodities	183.0	187.5	191.3	191.8	191.0	190.2	188.0	182.4	187.2	190.9	191.5	190.7	190.0	187.8
Apparel commodities less footwear	178.9	183.7	187.6	188.2	187.3	186.3	184.1	177.9	183.1	187.0	187.7	186.8	185.8	183.7
Men's and boys'	189.8	192.8	195.2	197.4	197.8	196.4	194.5	189.9	193.1	195.7	197.8	198.2	196.6	194.8
Men's (12/77 = 100)	119.3	121.6	123.2	124.7	124.9	123.7	122.5	119.6	122.2	123.8	125.4	125.5	124.1	123.1
Suits, sport coats, and jackets (12/77 = 100)	113.2	112.2	113.5	115.7	115.3	114.2	111.9	106.2	105.5	106.5	108.6	108.2	107.2	105.0
Coats and jackets	96.1	100.9	100.7	100.4	101.0	98.1	95.7	99.6	103.3	103.0	103.3	103.9	101.4	98.5
Furnishings and special clothing (12/77 = 100)	145.6	149.0	150.6	151.3	151.6	151.6	151.6	141.8	144.8	146.0	146.9	147.1	146.9	147.3
Shirts (12/77 = 100)	125.6	128.0	130.6	132.5	133.4	132.3	130.8	127.7	130.5	133.7	135.5	136.2	134.7	133.0
Dungarees, jeans, and trousers (12/77 = 100)	111.3	115.4	117.3	119.1	119.1	117.5	117.5	117.2	121.6	123.8	125.7	125.5	123.7	123.6
Boys' (12/77 = 100)	124.1	124.4	125.9	126.6	127.2	127.5	126.3	122.7	122.8	124.5	125.2	126.0	125.9	124.7
Coats, jackets, sweaters, and shirts (12/77 = 100)	120.8	116 2	120 0	121.9	122.2	122 1	120.7	123.1	117.3	122.0	123 6	124.2	123.5	122.3
Furnishings (12/77 = 100)	136.5	138.9	138.2	138.8	140.6	141.0	141.2	132.2	134.5	133.8	134.4	136.4	136.7	136.5
Suits, trousers, sport coats, and jackets (12/77 = 100)	121.8	125.1	125.6	125.3	125.8	126.3	124.8	119.0	122.8	123.2	123.1	123.6	123.8	122.3

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
Women's and girls'	156.2	164.1	169.9	170.0	168.0	166.5	163.4	157.4	165.8	171.5	172.0	169.7	168.4	165.0
Women's (12/77 = 100)	103.7	109.3	113.4	113.6	111.9	110.8	108.7	104.8	110.9	114.9	115.2	113.3	112.3	110.2
Coats and jackets	156.8	161.0	164.8	168.2	159.5	156.1	150.7	162.4	166.3	169.8	172.7	163.5	159.5	153.5
Dresses	163.7	172.3	182.5	178.7	179.1	176.4	168.1	153.1	159.7	168.7	166.9	167.3	164.5	157.7
Separates and sportswear (12/77 = 100)	88.2	98.6	102.4	103.2	102.1	101.0	98.8	88.6	98.7	102.7	103.6	102.6	101.9	99.5
Underwear, nightwear, and hosiery (12/77 = 100)	136.7	139.0	140.4	141.1	141.4	140.3	139.6	136.2	138.5	139.8	140.5	140.9	139.8	139.2
Suits (12/77 = 100)	74.4	80.9	88.7	89.1	82.6	83.1	85.1	87.1	100.2	109.8	108.9	100.6	101.9	102.6
Girls' (12/77 = 100)	104.6	108.3	110.7	110.7	110.7	110.6	108.8	104.0	107.7	110.6	111.0	110.8	110.8	109.5
Coats, jackets, dresses, and suits (12/77 = 100)	99.7	100.3	105.1	102.0	101.8	101.8	100.7	98.4	100.1	104.9	102.4	102.0	102.1	102.2
Separates and sportswear (12/77 = 100)	96.9	103.4	105.0	106.8	107.0	106.8	104.0	96.7	102.3	104.9	107.5	107.3	107.5	104.4
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	127.1	130.5	130.7	132.1	132.2	132.0	131.2	125.7	129.5	129.7	131.1	131.2	130.7	130.1
Infants' and toddlers'	281.2	298.8	302.1	295.3	298.3	300.7	294.5	292.0	310.1	314.5	306.4	310.6	313 5	306.4
Other apparel commodities	218.0	215.5	216.9	215.8	215.1	216.3	216.7	206.0	203.0	204.2	203.3	202.7	204.0	204.5
Sewing materials and notions (12/77 = 100)	122.5	122.0	122.9	121.4	123.0	125.3	123.7	120.7	119.5	120.5	119.8	121.4	123.4	121.9
Jewelry and luggage (12/77 = 100)	148.8	146.6	147.6	147.3	145.9	146.0	147.0	138.9	136.7	137.4	136.8	135.5	135.8	137.0
Footwear	208.0	210.1	213.1	213.2	213.2	213.9	211.4	208.7	210.8	213.4	213.3	213.3	214.1	211.6
Men's (12/77 = 100)	137.5	136.5	139.1	139.1	139.8	139.8	139.5	139.6	138.5	140.9	141.1	141.8	141.8	141.4
Boys' and girls' (12/77 = 100)	131.0	136.9	137.1	134.5	134.5	136.7	134.8	133.7	139.7	139.5	136.9	137.1	139.3	137.5
Women's (12/77 = 100)	124.2	124.6	127.0	128.6	128.1	127.7	125.5	120.8	120.8	123.1	124.6	123.9	123.6	121.2
Apparel services	305.1	316.0	317.1	318.4	319.4	319.9	321.4	303.0	313.6	314.7	316.1	317.0	317.6	319.0
Laundry and drycleaning other than coin operated (12/77 = 100)	183.4	189.3	190.2	190.8	191.4	191.6	192.1	181.7	187.3	188.2	188.8	189.4	189.6	190.1
Other apparel services (12/77 = 100)	157.2	163.9	164.3	165.2	165.7	166.0	167.6	158.5	165.2	165.5	166.5	167.0	167.4	168.8
TRANSPORTATION	312.9	314.3	316.7	320.0	321.4	321.8	321.8	315.2	316.3	318.7	322.0	323.3	323.6	323.5
Private	307.5	308.7	311.0	314.6	316.0	316.3	316.1	311.2	312.2	314.6	318.0	319.4	319.6	319.3
New cars	208.1	213.9	214.1	214.1	214.5	214.7	214.7	207.6	213.1	213.4	213.4	213 8	214.0	214.0
Used cars	383.2	384.6	386.1	386.4	384.2	380.3	376.7	383.2	384.6	386.2	386.4	384.2	380 3	376.7
Gasoline	369.8	351.6	351.6	373.8	381.4	384.5	385.3	371.4	353.2	353.2	375.3	382.7	386.0	387.0
Automobile maintenance and repair	341.6	348.2	348.5	348.2	349.6	350.4	351 5	342.3	349.2	349.6	349.3	350.6	351.5	352.2
Body work (12/77 = 100)	172.9	178.4	178.3	178.2	178.6	179.5	180.1	171.6	177.0	177 1	176.7	177.1	178.3	178.8
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	166.5	170.2	170.6	170.9	171.1	170.9	170.6	170.6	174.5	175.1	175.4	175.7	175.5	175.3
Maintenance and servicing (12/77 = 100)	155.3	157.4	157.2	156.8	157.9	157 9	158.2	154 5	156.8	156.5	156.0	157.0	157.0	157.2
Power plant repair (12/77 = 100)	163.5	166.6	167.0	167.0	167.5	168.6	169.5	163 2	166 4	166.8	166 9	167 4	168.5	169.3
Other private transportation	272.4	284.4	284.5	285.8	285.6	286.6	287.6	273.4	285.2	285.1	286.3	285.9	286.9	287.7
Other private transportation commodities	200.6	203.8	201.9	202.8	201.3	203.9	202.2	202 9	206 1	204.2	205.1	203.5	205.9	204.3
Motor oil, coolant, and other products (12/77 = 100)	154.3	156.0	156.4	156.1	155.7	156.6	156 0	153 8	155 2	155.4	154.7	154.4	155.4	154.6
Automobile parts and equipment (12/77 = 100)	126.2	128.3	126.8	127.6	126.5	128 3	127 1	127 8	129.9	128.5	129.2	128.1	129.8	128.6
Tires	169.6	174.0	171.4	173.0	171.1	175 0	172.3	173.0	177 7	175 0	176.5	174 6	178.2	175.7
Other parts and equipment (12/77 = 100)	134.7	133.9	133.5	133.4	132.9	132 3	132.9	134 1	133.2	132.8	132.8	132.4	131.7	132.3
Other private transportation services	294.1	308.5	309.1	310.5	310.7	311 3	313.0	294.6	308 7	309 2	310.4	310 4	310.9	312.4
Automobile insurance	324.8	346.3	348.3	351.8	354.2	356.0	359 0	323 9	345 2	347.2	350.5	352 9	354.7	357.7
Automobile finance charges (12/77 = 100)	166.2	168.1	166.6	165.6	163.3	162 7	161.2	165 7	167.7	166.2	165.2	162 8	162.2	160.7
Automobile rental, registration, and other fees (12/77 = 100)	152.0	159.1	159.6	159.9	159.7	159.6	161.6	153 1	160.4	161 0	161.3	161.1	161.0	163.0
State registration	199.8	213.6	214.6	214.6	214.6	214 6	218.7	200.0	213.1	214.1	214 1	214 1	214.1	217.8
Drivers' licenses (12/77 = 100)	161.0	164.6	164.6	164.6	164.8	164.8	167 3	161 2	164.9	164.9	164.9	165 1	165.1	167.4
Vehicle inspection (12/77 = 100)	139.9	142.2	142.4	144.7	144.7	144 7	150.6	140.4	142.3	142.5	144.4	144.4	144.4	149.9
Other vehicle-related fees (12/77 = 100)	166.5	171.8	172.2	172.7	172.0	172.0	172.6	173 8	180.0	180.5	181.4	180.6	180.5	181.3
Public	389 3	394.4	397.3	398.0	398.4	399.3	402.4	380.7	384.2	386.7	387.4	387.6	388 4	392.1
Airline fare	450.1	468.7	464.3	466.2	466.8	467.8	468.0	446.6	453.8	459.9	462.1	462.5	463.3	463.1
Intercity bus fare	438.9	456.5	454.4	453.5	456.4	458 7	469 6	438 7	455.2	452.2	451.7	455.3	457.4	468.9
Intracity mass transit	346.6	347.0	347.7	347.6	347.6	348 3	354 6	346.6	346.8	347.5	347.4	347.4	348 1	353.9
Taxi fare	310.4	315.0	317.4	317.4	317.4	318 2	318 7	319 7	324.1	326.7	326 8	326.8	327.4	327.8
Intercity train fare	381.9	390.3	390.3	390.2	387.1	389.9	392.9	382.1	390.7	390.7	390.7	387.0	390.3	393.3
MEDICAL CARE	380 3	393.8	396.5	398.0	399.5	401.7	404 0	378.5	392.0	394.6	396.1	397.7	399.8	402.0
Medical care commodities	240.7	249.8	251.9	253.9	255.2	257.0	257 8	240.7	249.6	251.5	253.5	254.8	256.7	257.4
Prescription drugs	234.9	247.6	250.9	253.6	254.7	256.8	258.4	236.3	249 2	252.4	255.1	254.6	258.2	259.9
Anti-infective drugs (12/77 = 100)	166.1	171.9	174.0	175.7	175.6	177 1	179 8	168 3	174.7	176.7	178 4	178 4	179.9	182.7
Tranquilizers and sedatives (12/77 = 100)	205.1	223.2	227.9	233.9	234.7	237.1	238.4	205 1	223 1	227 8	233.8	234.4	236.9	238.2
Circulatories and diuretics (12/77 = 100)	170.4	178.5	180.9	182.7	184.5	185.9	186.3	169.5	177 8	180 1	181 8	183.5	184.9	185.2
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	216.2	229.6	230.8	231.3	232.3	234 5	235 8	218.4	232.2	233.2	233 9	234 4	237.0	238 5
Pain and symptom control drugs (12/77 = 100)	189.7	198.1	200.9	202.7	205.3	206.0	206.9	191.7	200.3	203.0	204.6	207.5	208.1	209.0
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	175.9	183.2	185.7	187.1	186.8	188 2	188.8	176.5	184.0	186.4	187 9	187.5	188.7	189.2
Nonprescription drugs and medical supplies (12/77 = 100)	164.3	168.0	168.6	169.5	170.4	171.5	171 5	165.1	168.9	169.5	170.4	171.5	172.7	172.6
Eyeglasses (12/77 = 100)	140.6	144.0	144.5	144.7	144.2	146.2	145.8	139 5	143.0	143 4	143.4	143.0	145.3	144.8
Internal and respiratory over-the-counter drugs	269.5	275.1	276.6	278.5	280.4	281.9	282 5	270 6	276 2	277 6	279.6	281.8	283.3	283.6
Nonprescription medical equipment and supplies (12/77 = 100)	157.0	161.2	161.1	161.7	163.2	163.8	163 1	158.4	162.8	162.6	163.1	165.0	165.8	164.9

20. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
Medical care services	410.9	425.3	428.1	429.4	430.9	433.0	435.8	408.6	423 1	425 7	427.1	428 7	430.7	433.3
Professional services	347.0	359.3	361.9	363.0	364.5	366.4	368.1	347.4	359.7	362.4	363.6	365.0	366 8	368.5
Physicians' services	378.1	389.6	392.6	393.9	395.6	397.8	400.2	382.1	393 9	397.0	398.5	400.3	402.3	404.7
Dental services	327.9	340.4	343.3	344.5	345.8	347.3	348 5	325.7	338 0	340.7	342.0	343 2	344.5	345.7
Other professional services (12/77 = 100)	160.1	168.0	168.4	168.5	169.0	170.4	170 8	156.4	164.3	164.7	164.8	165.3	166.4	166.8
Other medical care services	488.3	505.2	508.0	509.6	511.2	513.6	517.6	485.2	502.3	505.0	506.6	508.2	510.5	514.4
Hospital and other medical services (12/77 = 100)	210.9	220.6	221.6	222.0	222.4	222.9	224.2	208.9	218.1	215.8	219.2	219 6	220.1	221.3
Hospital room	672.9	700.7	703.6	704.2	705.7	707.4	710.6	664.6	690.3	692.2	692.9	694.4	695.8	698 6
Other hospital and medical care services (12/77 = 100)	207.0	217.3	218.4	219.0	219.3	219.7	221.3	205.4	215.5	216.3	216.8	217.1	217.6	219.0
ENTERTAINMENT	255.3	266.3	262.2	263.3	263.6	264.8	265.7	251.4	256.9	257.3	258.6	258.9	260.1	260.9
Entertainment commodities	253.3	257.9	258.7	259.5	259.5	260.1	260.8	247.8	251.9	252.2	253.2	253.1	253.9	254.5
Reading materials (12/77 = 100)	164.5	171.5	173.3	173.7	173.3	175.5	176.9	164.0	170.7	172.4	172.9	172.6	174.6	175.9
Newspapers	315.0	323.2	324.3	325.8	327.5	327.8	328.1	315.1	323.5	324.5	326.1	327.9	328.2	326.4
Magazines, periodicals, and books (12/77 = 100)	169.4	179.6	182.8	182.8	181.0	185.3	188.2	169.3	179.4	182.2	182.7	180.8	185.3	188.4
Sporting goods and equipment (12/77 = 100)	137.8	139.9	140.2	140.4	139.9	139.4	139.9	131.4	133 7	133.4	133.8	133.2	133.1	133.8
Sport vehicles (12/77 = 100)	142.9	146.7	147.0	147.3	146.9	145.6	146.6	132.6	136.6	136.0	136.5	136.0	135.4	136.6
Indoor and warm weather sport equipment (12/77 = 100)	117.7	117.6	118.1	118.0	116.8	117.0	117.5	115.9	115.8	116.3	116.1	115.1	115.2	115.8
Bicycles	200.2	199.5	200.0	201.4	202.9	204.0	203.4	201.2	200.9	201.6	202.9	204.2	205.7	204.9
Other sporting goods and equipment (12/77 = 100)	134.3	133.2	132.6	132.6	130.3	131.1	131.3	134.2	132.9	132.3	131.9	129.8	130.7	130.9
Toys, hobbies, and other entertainment (12/77 = 100)	141.7	142.2	142.0	142.6	143.1	143.1	142.8	140.7	141.1	141.0	141.6	142.1	142.1	141.8
Toys, hobbies, and music equipment (12/77 = 100)	139.3	137.8	137.3	138.4	138.7	139.1	138.4	135.9	134.3	133.8	135.0	135 2	135.6	135.0
Photographic supplies and equipment (12/77 = 100)	134.2	135.1	136.0	135.8	136.4	136.4	136.2	135.6	136.3	137.2	136.9	137 6	137.6	137.4
Pet supplies and expenses (12/77 = 100)	151.4	155.2	154.9	155.2	155.9	155.1	155.4	152.7	156.3	156.0	156.3	157.0	156.3	156.6
Entertainment services	258.5	266.7	267.6	269.2	269.9	272.0	273.3	258.8	266.8	267.4	269 2	270.0	272.0	273.2
Fees for participant sports (12/77 = 100)	159.7	166.5	166.9	167.7	168.3	169.8	170.8	160.4	167.5	167.4	168.5	169.3	170.5	171.2
Admissions (12/77 = 100)	156.0	159.4	159.4	160.7	161.5	162.9	163.5	155.0	158.1	158.4	159.7	160.4	162.0	162.7
Other entertainment services (12/77 = 100)	135.3	138.2	139.8	140.4	139.9	140.0	140.3	136.0	138.6	140.3	140.8	140.0	140.1	140.5
OTHER GOODS AND SERVICES	306.5	320.5	321.1	321.8	322.3	323.0	325.0	304.5	317.1	317.6	318.3	318.8	319.5	321.8
Tobacco products	313.2	323.2	323.7	324.0	324.1	324.8	330.0	312.9	323.0	323.4	323.6	323 6	324.4	329.7
Cigarettes	322.0	332.5	332.8	332.9	332.9	333.8	339.4	320.9	331.4	331.7	331.7	331.7	332.6	338.2
Other tobacco products and smoking accessories (12/77 = 100)	159.3	163.1	164.7	165.5	166.0	165.6	166.8	159.4	163.0	164.8	165.6	166.0	165.6	166.8
Personal care	271.8	278.2	278.7	279.8	280.9	281.7	282.3	269.7	275.9	276.3	277.5	278.6	279.2	279.9
Toilet goods and personal care appliances	270.2	275.4	276.0	277.1	277.5	277.9	278.9	270.9	275.9	276.5	277.5	277.8	278.2	279.2
Products for the hair, hairpieces, and wigs (12/77 = 100)	156.1	152.0	157.2	157.4	156.4	156.1	157.5	155.1	156.1	156.3	156.6	155.7	155.4	156.6
Dental and shaving products (12/77 = 100)	167.2	175.8	174.5	176.2	175.3	175.8	176.1	165.2	173.5	172.3	173.8	173.1	173.7	174.0
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	154.0	155.6	155.8	155.9	157.1	157.2	158.3	155.1	156.8	156.8	156:8	157.8	157.8	158.9
Other toilet goods and small personal care appliances (12/77 = 100)	152.7	155.3	157.5	158.3	159.8	160.5	159.8	156.4	158.9	161.1	162.0	163.3	164.0	163.5
Personal care services	274.3	281.7	282.0	283.3	285.0	286.1	286.3	269.0	276.3	276.5	278.0	279.7	280.7	280.9
Beauty parlor services for women	277.3	284.3	285.1	286.2	288.2	289.5	289.0	270.2	277.1	277.8	279.2	281.1	282.0	281.6
Haircuts and other barber shop services for men (12/77 = 100)	152.1	156.8	156.3	157.2	157.2	158.4	159.3	150.9	155.5	155.1	156.0	156.8	157.3	158.2
Personal and educational expenses	358.6	386.9	387.6	388.3	388.5	389.1	390.1	361.3	389.3	390.1	390.7	390.9	391.6	392.5
Schoolbooks and supplies	318.8	343.8	343.9	344.5	344.5	344.9	345.5	323.4	348.7	348.8	349.4	349.5	349.9	350.6
Personal and educational services	367.9	396.9	397.9	398.5	398.8	399.4	400.4	370.8	399.4	400.3	401.0	401.2	401.9	402.9
Tuition and other school fees	184.8	201.4	201.4	201.5	201.5	201.6	202.1	185.6	202.5	202.5	202.6	202.6	202.7	203.1
College tuition (12/77 = 100)	185.2	201.5	201.5	201.6	201.6	201.8	202.3	186 0	202.5	202.5	202.5	202.5	202.7	203.2
Elementary and high school tuition (12/77 = 100)	183.9	206.4	201.4	201.4	201.4	201.4	201.4	185.0	202.9	202.9	202.9	202.9	202.9	202.9
Personal expenses (12/77 = 100)	205.0	212.6	214.9	216.5	217.0	218.2	219.0	205.6	212.7	214.8	216.6	216.6	217.8	218.7
Special indexes:														
Gasoline, motor oil, coolant, and other products	365.9	348.7	356.7	369.9	377.1	380.1	380.8	367.3	350.2	358.1	371.2	378.3	381.5	382.4
Utilities and public transportation	362.9	358.3	360.6	360.9	365.1	371.8	373.7	362.0	356.7	358.9	359.1	363.2	370.6	372.4
Housekeeping and home maintenance services	370.9	377.6	381.8	381.8	381.7	382.8	384.0	379.9	386.6	390.9	391.1	391.0	392.3	393.6

21. Consumer Price Index for All Urban Consumers: Cross classification of region and population size class by expenditure category and commodity and service group

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000–1,250 million)			Size class C (75,000–385,000)			Size class D (75,000 or less)		
	1985			1985			1985			1985		
	Feb.	Apr.	June	Feb.	Apr.	June	Feb.	Apr.	June	Feb.	Apr.	June
Northeast												
EXPENDITURE CATEGORY												
All items	165.5	166.7	167.5	171.5	173.5	173.5	175.8	177.8	179.0	170.3	174.2	173.7
Food and beverages	157.0	157.7	157.7	156.0	156.5	155.6	158.3	158.3	159.2	153.6	155.2	154.4
Housing	170.5	171.2	172.6	184.3	186.7	186.4	189.9	193.1	194.7	177.4	185.9	184.0
Apparel and upkeep	124.9	127.6	124.9	121.3	128.7	127.7	134.2	136.9	138 9	137.7	137.4	136.6
Transportation	173.0	174.8	176.0	176.4	178.1	179.0	176.3	177.7	178.5	175.5	177 7	178.9
Medical care	184.5	187.1	189.3	185.2	186.9	188.8	185.5	189.1	191 8	194.0	195.9	198.1
Entertainment	151.8	153 9	154.4	146.8	147.5	149.3	157.1	159.0	159.9	158.2	158.1	158.2
Other goods and services	180.7	181.9	182.4	179.8	179.9	180.9	184.5	185.5	185.6	182.7	183.4	184.1
COMMODITY AND SERVICE GROUP												
Commodities	156.7	157.6	157.4	161.7	163.5	163.0	161.3	162.2	162.9	159.6	160.8	160.4
Commodities less food and beverages	156.0	157.1	156 7	163.6	166.2	166.0	162.2	163.7	164.3	161.9	163 0	162 8
Services	176.2	177 6	179.5	186.1	162.3	189.0	198.7	202.0	204.2	185.8	193.5	192.9
North Central Region												
EXPENDITURE CATEGORY												
All items	174.3	175.9	177.6	169.7	171.7	172.6	166.7	168.6	169.6	168.2	169.1	170.4
Food and beverages	152.5	152 4	152.5	151.3	151.1	150.6	151.7	151.9	151.9	158.9	158.9	158.8
Housing	193.6	194.6	199.3	178.5	180.6	182 5	173.3	175.5	177.7	172.1	171.7	174 2
Apparel and upkeep	120.1	123.9	122.4	132.9	135.6	134.8	131.3	135.7	132.5	126.5	129.4	130.1
Transportation	172.8	176.2	177.1	172.7	177.4	178.2	175 6	179.0	180.7	173.7	178.1	179.0
Medical care	184.6	186.6	187.9	188.2	189.4	191.6	178.3	180.1	180.7	189 4	191.1	193.3
Entertainment	150.2	150.8	150.4	142.2	142.5	143.6	155.6	156.0	155.7	147.3	144.1	144.2
Other goods and services	175.7	176.0	176.7	188.7	188.6	187.9	170.8	169.9	169.9	184.9	186.1	186.1
COMMODITY AND SERVICE GROUP												
Commodities	159.7	161.7	161.7	158.1	160.4	159.9	156.1	157.9	158.5	156.2	158.0	158.3
Commodities less food and beverages	162.8	166.0	166.1	160.6	164.2	163.8	157.9	160.6	161.5	154.8	157.6	158.2
Services	195.5	196.6	200.6	188.0	189.7	192.4	183.4	185.5	187.1	186.8	186.6	189.1
South												
EXPENDITURE CATEGORY												
All items	171.0	172.4	174.1	173.0	173.7	175.3	171.2	172.2	172.6	170.1	171 6	172.2
Food and beverages	160.0	159.9	159.7	159.5	158 9	159.3	156.3	155.7	155.0	160.0	159.9	159.2
Housing	177.2	178.1	181.5	178.2	178.0	181.3	177.1	177.3	178.2	176 7	177.9	178.9
Apparel and upkeep	135.3	138.7	138.5	130.8	132.7	132.2	129.5	130.2	132.0	114.9	113.0	118.3
Transportation	175.5	178.5	179.8	180.2	183.3	184.0	178.2	181.6	182.3	173.1	176.9	177.1
Medical care	185.6	188.1	189.6	187.9	189.3	190.7	195.8	197.1	197.9	199.9	201.0	202.9
Entertainment	153.1	154.4	155.8	163.8	163.5	164.9	154.9	157.5	157.9	153.4	154.7	154.8
Other goods and services	178.4	179.2	179.7	182.5	184.7	186.3	181.1	181.5	182.4	176.0	175.6	178.5
COMMODITY AND SERVICE GROUP												
Commodities	160.9	163.0	162.9	163.0	164.5	164.9	160.6	161.7	161.9	159.6	161.5	161.5
Commodities less food and beverages	160.8	164.1	164.1	163.8	166.7	167.1	162.3	164.4	165.2	158.9	161.6	162.3
Services	184.5	185.2	188.9	187.5	187.3	190.4	187.5	188.2	189.3	185.7	187.0	188.2
West												
EXPENDITURE CATEGORY												
All items	173.5	174.6	176.1	172.0	174 4	176.2	164 2	166 9	168 4	170.0	170 8	172 5
Food and beverages	158.9	158.9	159.0	163.1	162.9	162.4	158.2	158.7	157.7	166.2	166.3	168.4
Housing	182.2	182.4	185.1	176.2	179.2	182.8	161.9	164.2	168.0	171.6	172.2	173.9
Apparel and upkeep	127.8	127.3	127.8	131.0	133.9	133.9	126.8	130.3	127.4	146.6	144.0	144.2
Transportation	180.1	184.2	185.2	180.3	184.5	185.4	176.0	181.7	182.3	172.5	173.9	176.2
Medical care	191.8	193.4	195.5	186.8	190.0	191.9	196.0	198.1	200.9	192.5	193.5	194.5
Entertainment	147.9	149.6	151 7	155.5	156.6	159 9	162.6	165 8	166 9	157 1	159 5	161 2
Other goods and services	185.7	186 5	187.3	181.7	182 6	183 3	176 9	177.8	179 2	182.0	183 7	184.5
COMMODITY AND SERVICE GROUP												
Commodities	158.3	159.9	160.0	161.8	163 9	163 9	158.5	161 7	161 2	158 6	159 5	161 2
Commodities less food and beverages	157.8	160.5	160.6	160.7	164 1	164 5	157 8	162 6	162.4	154 5	155.7	157.3
Services	192.4	193.0	196.1	185.4	188.4	192.0	170 8	172 9	176.4	186 5	187.3	188 9

22. Consumer Price Index—U.S. city average, and selected areas

[1967 = 100 unless otherwise specified]

Area[1]	All Urban Consumers							Urban Wage Earners and Clerical Workers						
	1984	1985						1984	1985					
	July	Feb.	Mar.	Apr.	May	June	July	July	Feb.	Mar.	Apr.	May	June	July
U.S. city average[2]	311.7	317.4	318.8	320.1	321.3	322.3	322.8	307.5	313.9	315.3	316.7	317.8	318.7	319.1
Anchorage, AK (10/67 = 100)	275.5	...	280.0	...	278.8	...	283.1	266.8	...	273.1	...	271.9	...	276.0
Atlanta, GA	...	322.6	...	324.6	...	328.0	...	...	320.3	...	322.3	...	326.0	...
Baltimore, MD	313.0	...	320.7	...	323.1	...	324.0	311.6	...	320.2	...	322.3	...	323.4
Boston, MA	304.9	...	314.4	...	315.2	...	317.7	300.8	...	312.3	...	313.2	...	315.7
Buffalo, NY	...	301.3	...	305.4	...	307.3	...	...	288.1	...	291.9	...	293.7	...
Chicago, IL–Northwestern IN	310.8	316.7	317.4	319.1	319.8	324.1	324.4	299.0	304.0	304.7	306.2	306.9	310.9	311.1
Cincinnati, OH—KY—IN	323.3	...	328.4	...	330.4	...	330.0	314.4	...	322.2	...	324.0	...	323.2
Cleveland, OH	...	340.4	...	342.4	...	346.4	...	...	319.8	...	321.8	...	325.3	...
Dallas–Ft. Worth, TX	...	333.2	...	335.6	...	339.6	...	...	...	329.9	329.6	...	333.5	...
Denver–Boulder, CO	349.9	...	355.1	...	356.3	...	360.3	347.1	...	350.7	...	351.9	...	355.9
Detroit, MI	307.7	313.7	315.5	315.8	316.7	317.0	318.0	298.3	304.0	306.0	306.3	306.6	307.4	308.3
Honolulu, HI	...	292.6	...	292.7	...	293.5	...	...	300.3	...	300.1	...	300.4	...
Houston, TX	...	333.6	...	335.3	...	337.6	...	...	331.1	...	332.8	...	335.0	...
Kansas City, MO—KS	...	314.6	...	319.8	...	320.1	...	...	304.4	...	309.7	...	310.5	...
Los Angeles–Long Beach, Anaheim, CA	305.9	314.1	314.7	315.9	319.1	319.3	321.3	300.3	309.1	309.8	311.2	314.1	314.1	315.8
Miami, FL (11/77 = 100)	167.0	...	170.1	...	171.0	...	171.4	168.0	...	171.3	...	172.2	...	172.7
Milwaukee, WI	321.3	...	327.8	...	330.9	...	331.1	341.6	...	346.9	...	350.2	...	350.4
Minneapolis–St. Paul, MN—WI	...	330.4	...	333.6	...	341.4	...	...	306.0	...	329.2	...	332.3	...
New York, NY–Northeastern NJ	302.9	310.2	310.9	311.8	312.6	313.2	313.5	294.7	303.6	304.2	305.1	305.8	306.3	306.5
Northeast, PA (Scranton)	297.3	...	304.9	...	306.0	...	306.6	295.9	...	304.2	...	305.2	...	305.7
Philadelphia, PA—NJ	301.4	309.2	310.4	312.4	314.2	314.2	315.5	304.3	312.4	313.5	315.3	317.2	317.2	318.6
Pittsburgh, PA	...	323.8	...	324.3	...	325.9	...	...	306.0	...	306.8	...	308.3	...
Portland, OR—WA	300.9	...	309.0	...	310.4	...	312.9	294.6	...	299.8	...	301.2	...	303.2
St. Louis, MO—IL	308.7	...	314.3	...	315.9	...	319.9	301.4	...	311.0	...	313.0	...	316.6
San Diego, CA	351.3	...	369.2	...	372.1	...	372.8	324.6	...	333.7	...	336.5	...	336.9
San Francisco–Oakland, CA	...	328.7	...	330.4	...	333.2	...	...	324.2	...	326.1	...	328.7	...
Seattle–Everett, WA	314.3	...	321.4	...	321.0	...	322.0	295.7	...	309.0	...	308.4	...	309.1
Washington, DC—MD—VA	308.3	...	319.2	...	319.8	...	323.3	310.8	...	322.3	...	323.0	...	325.9

[1]The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated Area is used for New York and Chicago.

[2]Average of 85 cities.

23. Producer Price Indexes, by stage of processing

[1967 = 100]

Commodity grouping	Annual average 1984	1984					1985							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
FINISHED GOODS														
Finished goods	291.1	291.3	289.5	291.5	292.3	292.0	292.3	292.6	292.1	293.1	294.2	294.0	294.8	293.5
Finished consumer goods	290.3	290.4	288.7	290.3	291.2	290.9	290.6	290.7	290.1	291.2	292.6	292.1	293.2	291.5
Finished consumer foods	273.3	274.0	273.0	271.1	272.0	273.6	273.7	275.6	273.7	272.2	269.7	268.5	271.7	269.5
Crude	281.6	274.6	270.3	269.5	257.6	263.0	255.4	279.4	275.5	r279.9	262.6	240.4	265.4	255.8
Processed	270.3	271.7	271.1	269.1	271.0	272.3	273.1	273.1	271.3	r269.3	268.2	268.8	270.1	268.5
Nondurable goods less foods	337.3	336.9	336.2	337.8	338.9	336.7	334.9	332.7	333.4	r337.4	342.6	342.0	342.1	339.9
Durable goods	236.8	236.7	233.0	238.3	239 0	239.2	240.2	240.9	240.4	r240.7	241.5	241.9	241.7	241.5
Consumer nondurable goods less food and energy	239.0	240.1	240.8	240.6	241.1	240.7	242.8	243.9	244.4	r245.0	245.1	245.5	247.4	247.2
Capital equipment	294.0	294.6	292.5	295.9	296.5	295.6	298.5	299.2	299.3	r299.9	299.8	300.7	300.8	300.9
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	320.0	321.1	320.3	320.1	320.4	319.9	319.6	318.7	318.6	r319.3	319.9	320.2	318.6	317.8
Materials and components for manufacturing	301.8	302.5	301.9	301.4	301.7	301.1	300.6	300.5	300.0	r300.6	300.6	300.4	299.7	298.8
Materials for food manufacturing	271.1	272.4	270.0	267.6	269.5	268.2	265.2	265.3	263.9	r263.9	261.3	262 1	260.6	253.4
Materials for nondurable manufacturing	290.5	291.3	290.9	290.4	289.8	289.2	288.9	288.0	287.3	r287.1	286.9	286.3	285.7	285.2
Materials for durable manufacturing	325.1	325.1	323.5	322 3	323 1	321.9	320.6	320.7	319.9	r322.1	322.9	322.6	321.0	320 2
Components for manufacturing	287.5	288.4	288.9	289.4	289.7	289.9	290.4	290.8	291.0	291.1	291.2	291.2	291.5	291.7
Materials and components for construction	310.3	312.0	311.7	311.8	311.8	312.4	313.4	313.3	313.5	r314.0	315.8	317.3	317.0	316.4
Processed fuels and lubricants	566.2	569.2	565.3	564.1	566.6	561.3	556.3	546.3	547.9	r552.3	558.2	559.3	544.1	541.2
Manufacturing industries	483.5	484.7	481.8	483.4	486.1	483.0	478.7	469.7	471.8	r474.6	477.7	474 3	459.7	458.5
Nonmanufacturing industries	638.1	643.0	638.1	634.3	636.5	629.2	623.5	612.6	613.9	619.8	628.2	633.6	618.2	613.9
Containers	302.3	304.1	305.2	308.8	310.1	310.4	311.1	311.8	313.1	r312.4	311.2	311.3	311.4	309.7
Supplies	283.4	284.1	283.6	283.2	282.9	283.1	283.9	283.8	283.8	r283.7	283.5	283.4	283.6	283.8
Manufacturing industries	279.0	280.9	280.7	281.5	281.7	282.2	283.5	283.7	284.4	r284.7	284.9	285.1	285.3	285.5
Nonmanufacturing industries	285.9	286.0	285.3	284.4	283.8	283.8	284.5	284.1	283.7	r283.4	283.0	282.7	283.0	283.2
Feeds	215.8	208.3	203.0	195.4	192.4	191.1	190.1	185.6	180.7	r176.9	172.6	171.3	173.0	172.9
Other supplies	300.6	302.2	302.3	302.7	302.6	302.8	303.8	304.2	304.7	r305.1	305.4	305.2	305.3	305.5
CRUDE MATERIALS														
Crude materials for further processing	330.8	328.9	326.2	319.6	323.2	322.4	318.9	318.1	312.3	r311.0	310.0	305.5	303.7	295.5
Foodstuffs and feedstuffs	259.5	256.5	252.7	244.9	252.8	253.0	250.7	250.0	242.9	r239.9	237.0	234.0	231.9	221.4
Nonfood materials	484.5	485.0	484.6	480.3	475.2	472.0	466.0	465.1	462.0	464.2	467.0	459.4	458.1	454.5
Nonfood materials except fuel	380.5	376.8	379.3	374.7	369.2	366.4	361.9	358.2	358.4	r360.2	357.9	354.1	353.6	351.3
Manufacturing industries	390.1	386.1	388.5	383.9	377.6	374.4	368.9	364.0	364.2	r365.9	363.2	358.7	358.3	355.7
Construction	278.7	277.6	279.9	276.3	276.3	276.4	279.7	283.9	284.7	r287.0	287.7	289.2	287.6	287.2
Crude fuel	931.3	953.1	937.6	935.9	934.0	929.8	916.6	930.5	910.8	r915.0	943.9	917.7	912.4	902.8
Manufacturing industries	1,092.2	1,120.1	1,100.0	1,097.6	1,095.1	1,089.7	1,072.2	1,090 4	1,064 5	r1,070.2	1,108.9	1,074.0	1,067.0	1,054.2
Nonmanufacturing industries	818.1	835.1	823.3	822.1	820.7	817.3	807.5	818.2	803.2	r806.3	827.5	808.1	804.2	797.0
SPECIAL GROUPINGS														
Finished goods excluding foods	294.8	294.8	292.7	296.1	296.9	295.8	296 3	295 9	296.0	297.8	300.1	300.3	300.3	299.3
Finished consumer goods excluding foods	294.1	293.8	291.7	295.0	295.9	294.8	294 3	293.5	293.6	r295.9	299 1	299.0	299.0	297.6
Finished consumer goods less energy	257.8	258.5	257.2	258.2	258.9	259.3	260.5	261.8	261.1	r260.9	260.4	260.2	262.0	261.0
Intermediate materials less foods and feeds	325.0	326.3	325.7	325.8	326.1	325.6	325.4	324.5	324.7	r325.5	326.4	326.6	324.9	324.4
Intermediate materials less energy	303.8	304.7	304.2	304.1	304.3	304.1	304.2	304.2	304.0	r304.3	304.5	304.6	304.3	303.6
Intermediate foods and feeds	253.1	251.4	248.1	244.0	244.3	243.0	240.7	239.2	236.7	r235.4	232.3	232.4	231.9	227.0
Crude materials less agricultural products	547.0	548.8	546.6	542.4	535.9	532.3	525.4	525.1	521.2	r523.5	527.5	518.6	516.8	514.4
Crude materials less energy	255.5	251 9	249.9	242 6	248.0	247.8	246.2	245.9	240.4	r238.6	235.3	232.0	230.4	222.1

[1]Data for April 1985 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

24. Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1984	1984					1985							
			Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
	All commodities	310.3	310.7	309.3	309.4	310 3	309.8	309.7	309.1	308.6	309.3	309.9	309.5	309.0	307.2
	All commodities (1957–59 = 100)	329.2	329.7	328.2	328.3	329.2	328.7	328.6	328.0	327.4	328.2	328.8	328.4	327.8	325.9
	Farm products and processed foods and feeds	262.4	261.4	259.4	255.3	258.1	258.6	257.6	258.0	254.6	ʳ253.1	250.6	249.1	250.0	244.4
	Industrial commodities	322.6	323.3	322.3	323.4	323.8	323.0	323 1	322.2	322.5	323.8	325.3	325.2	324.3	323.6
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	255.8	253.3	249.8	240.2	245.7	245.7	243.2	245.3	238.8	ʳ236.8	230.4	229.4	229.2	218.0
01–1	Fresh and dried fruits and vegetables	278.1	293.7	290.1	267.3	251.2	252.0	259.0	289.6	278.1	ʳ278.1	250.9	254.0	275.4	260.9
01–2	Grains	239.7	236.9	231.4	219.0	219.7	212.5	217.5	217.2	216.1	220.6	214.1	212.7	204.9	185.1
01–3	Livestock	251.8	253.7	244.9	233.9	247.7	252.3	247.4	249.7	236.6	231.3	227.7	226.7	224.0	211.6
01–4	Live poultry	240.6	218.6	239.7	219.2	247.1	231.7	232.7	222.4	215.5	202.3	214.6	223.6	227.6	216.0
01–5	Plant and animal fibers	228.4	211.3	210.3	202.8	201.4	203.0	204.5	200.6	200.4	211.3	202.8	199.1	201.7	194.5
01–6	Fluid milk	278.3	276.8	282.1	286.7	287.6	287.5	284.6	281.0	278.4	271.1	264.9	259.6	256.1	255.1
01–7	Eggs	210.8	181.2	177.6	179.9	176.0	187.5	141.9	161.5	167.6	175.1	150.2	147.7	164.0	168.9
01–8	Hay, hayseeds, and oilseeds	256.3	242.6	228.4	219.1	227.3	227.4	226.2	214.6	212.0	213.8	213.4	210.7	206.8	196.7
01–9	Other farm products	285.6	284.3	296.5	294.0	297.9	293.8	289.4	285.6	285.8	ʳ283.9	283.5	283.4	283.3	274.5
02	Processed foods and feeds	265.0	264.8	263.6	262.6	263.8	264.5	264.4	263.9	262.3	ʳ260.9	260.6	258.8	260.3	257.9
02–1	Cereal and bakery products	270.5	271.7	271.9	272.7	273.7	273.6	276.6	277.7	277.8	ʳ278.9	277.6	278.7	279.2	279.9
02–2	Meats, poultry, and fish	254.4	252.2	249.5	245.5	250.4	255.9	256.6	255.6	249.8	ʳ244.8	245.8	239.9	245.9	240.9
02–3	Dairy products	251.7	251.2	255.0	256.4	257.3	255.8	255.3	254.0	253.3	ʳ251.5	250.1	249.4	248.0	247.5
02–4	Processed fruits and vegetables	294.3	295.7	291.8	295.8	292.3	293.5	296.6	296.6	300.0	ʳ298.6	297.7	300.7	299.1	301.0
02–5	Sugar and confectionery	301.2	303.7	302.4	299.8	297.0	295.7	293.5	291.1	292.5	ʳ293.4	293.6	294.7	293.9	292.2
02–6	Beverages and beverage materials	273.1	274.6	274.6	276.1	276.0	275.6	275.9	277.5	277.1	ʳ276.9	277.9	274.4	276.4	275.6
02–7	Fats and oils	301.3	305.9	298.5	301.6	311.9	297.6	280.5	285.2	290.5	ʳ303.0	296.1	295.5	282.2	252.4
02–8	Miscellaneous processed foods	278.0	280.4	281.1	281.2	280.9	281.0	281.5	281.4	281.4	ʳ282.0	283.1	283.7	284.9	287.1
02–9	Prepared animal feeds	220.5	213.9	209.2	202.4	199.7	198.8	198.0	193.6	189.5	ʳ186.2	182.6	184.3	185.9	186.1
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	210.0	210.1	210.7	210.4	210.2	210.0	210.3	210.6	210.5	ʳ210.7	210.7	210.2	210.2	210.3
03–1	Synthetic fibers (12/75 = 100)	159.6	159.9	159.2	158.2	157.5	157.7	157.6	157.5	156.5	ʳ157.4	157.2	156.6	156.1	155.0
03–2	Processed yarns and threads (12/75 = 100)	142.8	142.1	142.2	141.4	140.8	140.8	141.4	141.9	141.4	ʳ141.3	141.3	141.0	141.4	141.1
03–3	Gray fabrics (12/75 = 100)	153.7	154.4	154.6	154.8	153.7	154.0	153.8	152.6	152.1	151.8	152.3	151.7	151.5	150.2
03–4	Finished fabrics (12/75 = 100)	126.7	127.1	127.3	126.9	126.6	126.6	126.6	127.0	127.1	ʳ127.2	127.0	125.6	125.5	125.9
03–81	Apparel	201.3	201.0	202.2	201.9	202.2	202.1	202.7	203.2	203.3	ʳ203.7	203.6	203.8	204.1	204.7
03–82	Textile housefurnishings	238.9	240.0	240.5	241.3	241.4	238.3	239.5	240.8	241.3	ʳ241.1	240.9	239.9	240.0	239.9
04	Hides, skins, leather, and related products	286.3	298.7	288.7	287.7	283.8	283.6	283.7	283.7	282.4	ʳ284.7	283.6	285.2	284.5	286.0
04–2	Leather	372.3	378.1	371.4	369.3	359.8	354.5	358.1	352.5	348.5	ʳ350.3	350.1	349.7	347.5	348.3
04–3	Footwear	251.7	250.9	252.0	252.1	252.4	252.6	252.8	255.9	255.2	ʳ255.1	253.9	257.5	257.2	258.5
04–4	Other leather and related products	263.6	267.7	267.6	268.1	267.9	266.9	270.0	270.3	272.3	ʳ272.6	271.8	272.1	273.0	272.8
05	Fuels and related products and power	656.8	657.9	652.3	654.4	655.3	648.5	636.8	625.3	625.3	ʳ633.9	648.3	645.7	634.5	628.2
05–1	Coal	546.5	550.0	549.1	548.9	548.6	547.7	548.0	549.6	548.8	ʳ547.7	547.3	547.2	546.7	546.7
05–2	Coke	436.4	437.3	435.7	432.4	432.8	435.1	439.7	439.4	433.0	430.1	429.2	429.2	428.6	428.6
05–3	Gas fuels[3]	1,109.0	1,116.9	1,104.6	1,112.5	1,113.4	1,103.1	1,073.0	1,067.2	1,043.6	ʳ1,049.3	1,086.1	1,049.5	1,042.4	1,026.1
05–4	Electric power	439.9	456.7	456.4	445.4	443.0	440.8	446.0	446.0	447.6	ʳ449.1	448.2	460.5	462.5	463.7
05–61	Crude petroleum[4]	669.8	671.1	670.6	669.8	655.8	649.4	631.2	615.1	615.5	ʳ617.6	621.5	620.2	619.4	614.3
05–7	Petroleum products, refined[5]	665.1	654.8	646.5	655.5	661.5	652.3	635.5	615.6	620.6	636.5	657.6	654.4	630.7	621.8
06	Chemicals and allied products	300.8	301.1	300.9	301.3	301.6	300.7	301.6	302.2	302.6	ʳ303.3	303.2	303.4	303.7	303.7
06–1	Industrial chemicals[6]	341.3	340.9	337.7	335.9	334.7	334.8	336.8	336.7	336.7	ʳ336.0	335.3	336.9	336.9	340.7
06–21	Prepared paint	272.5	276.4	277.0	277.8	277.1	277.8	278.2	274.7	275.1	ʳ276.0	277.8	278.0	278.5	277.1
06–22	Paint materials	329.7	334.3	333.0	332.5	334.3	334.7	332.6	333.4	334.5	ʳ335.5	337.4	338.9	335.5	337.5
06–3	Drugs and pharmaceuticals	240.0	240.7	239.7	244.7	246.9	245.0	247.4	250.3	252.2	ʳ254.1	257.5	255.2	259.2	258.6
06–4	Fats and oils, inedible	371.4	350.1	359.4	365.1	380.1	376.7	346.2	347.1	346.3	348.9	331.5	298.4	280.2	257.9
06–5	Agricultural chemicals and chemical products	284.8	283.0	285.0	285.5	282.5	282.5	282.7	281.7	281.8	ʳ282.8	282.5	282.2	281.5	281.3
06–6	Plastic resins and materials	308.6	310.3	311.8	309.4	309.0	306.2	305.2	306.9	306.3	ʳ306.1	306.3	309.1	308.0	305.2
06–7	Other chemicals and allied products	277.5	278.3	279.6	279.7	281.3	280.1	282.0	282.8	283.0	ʳ284.6	283.0	284.3	284.5	283.5
07	Rubber plastic products	246.8	247.7	248.3	246.6	246.1	245.9	246.7	246.4	246.5	ʳ246.6	246.6	246.1	246.3	244.6
07–1	Rubber and rubber products	266.1	267.6	268.1	264.8	263.9	263.7	264.3	265.4	265.0	ʳ264.8	264.8	264.6	265.3	263.8
07–11	Crude rubber	276.8	273.0	273.9	271.2	270.4	272.1	275.5	273.3	270.5	ʳ269.5	268.1	271.0	270.9	269.8
07–12	Tires and tubes	242.1	243.7	244.2	239.2	238.3	237.1	238.4	239.5	238.9	ʳ238.7	239.6	237.7	238.4	236.7
07–13	Miscellaneous rubber products	290.6	293.7	294.0	292.9	291.8	292.5	291.1	293.2	294.0	294.1	293.3	294.4	295.4	294.0
07–2	Plastic products (6/78 = 100)	139.5	139.7	140.1	140.1	140.0	139.8	140.4	139.4	139.7	140.1	140.0	139.6	139.4	138.2
08	Lumber and wood products	307.4	304.7	303.3	300.3	301.0	303.0	304.4	303.4	303.1	ʳ301.5	307.0	313.8	310.5	305.8
08–1	Lumber	349.8	342.3	338.2	334.3	336.6	339.5	343.0	343.0	343.9	ʳ339.8	349.9	364.4	354.9	342.4
08–2	Millwork	307.8	307.2	307.4	307.0	309.5	311.6	312.6	311.6	310.2	309.5	310.8	312.3	314.0	313.9
08–3	Plywood	241.6	245.9	243.4	240.1	234.9	234.2	234.2	226.5	223.6	ʳ222.8	232.1	237.3	237.6	237.8
08–4	Other wood products	234.5	236.5	235.9	236.6	236.5	237.9	237.9	237.7	238.6	239.1	236.0	235.7	235.9	234.6

See footnotes at end of table.

24. Continued—Producer Price Indexes, by commodity groupings

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1984	1984					1985							
			Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	318.5	321.3	322.0	323.1	324.1	324.1	327.1	327.6	327.7	r327.6	327.2	327.0	327.2	326.5
09–1	Pulp, paper,and products,excluding building paper and board	293.3	296.3	297.5	299.3	299.7	298.9	298.1	297.1	295.7	r294.4	293.3	292.9	291.9	289.8
09–11	Woodpulp	397.2	410.2	409.1	408.2	397.3	392.1	381.2	364.8	353.6	r348.2	342.4	346.1	345.5	338.4
09–12	Wastepaper	240.1	254.5	249.6	235.6	221.4	206.0	190.8	192.6	170.2	154.4	144.0	141.6	141.6	141.4
09–13	Paper	302.9	307.0	306.7	306.7	306.9	305.7	306.3	304.4	303.5	r303.3	304.6	304.7	304.0	303.7
09–14	Paperboard	281.5	285.1	288.6	293.7	294.3	293.4	287.2	285.9	285.7	r284.2	282.1	276.2	273.2	266.3
09–15	Converted paper and paperboard products	281.2	282.4	284.4	286.9	289 0	289.3	290.4	291.4	291.0	r290.3	288.8	289.0	288.3	286.7
09–2	Building paper and board	259.0	259.8	259.4	257.7	253.7	253.4	255.3	256.2	256.3	r257.6	258.6	261.1	263.3	261.0
10	Metals and metal products	316.1	316.2	315.6	316.0	316.4	315.5	315.0	315.6	315.4	r316.8	316.3	315.1	314.6	314.9
10–1	Iron and steel	356.9	357 4	357.9	358.4	357.7	357.1	357.1	357.4	357.8	r357.4	356.3	354.9	354.6	355.0
10–17	Steel mill products	366.0	368.1	368.1	368.6	368.0	367.9	367.3	367.3	366.9	r367.0	367.3	366.9	366.1	365.7
10–2	Nonferrous metals	277.1	275.3	271.8	266.8	269.4	266.0	263.3	264.9	262.7	r268.4	268.1	263.9	261.3	261.2
10–3	Metal containers	350.0	352.0	352.3	357.4	357 4	357.2	357.4	357.9	357.9	r357.9	358.2	358.2	258.1	357.9
10–4	Hardware	296.9	298.0	299.0	299.9	299.9	300.9	302.6	303.2	304.8	r305.7	304.8	304.8	305.2	306.1
10–5	Plumbing fixtures and brass fittings	302.7	304.6	304.4	306.2	309.2	309.3	306.4	306.8	307.8	311.3	312.7	313.1	313.1	313.5
10–6	Heating equipment	252.9	255.5	255.7	256.1	256.0	256.4	256.3	257.3	257.6	r257.9	258.4	259.6	260.5	261.1
10–7	Fabricated structural metal products	310.7	312.3	312.1	313.8	312.7	313.2	313.5	313.5	314.5	r314.6	314.7	314.8	314.6	315.1
10–8	Miscellaneous metal products	295.3	295.0	295.8	301.5	301.6	301.8	301.8	302.2	302.0	302.1	301.8	302.5	303.0	303.1
11	Machinery and equipment	293.1	294.1	294.3	294.8	295.3	295.6	297.9	297.6	297.8	r298.1	298.8	299.1	299 1	299.4
11–1	Agricultural machinery and equipment	336.1	338.8	337.2	337.3	337.0	337.6	338.5	338.3	338.5	r338.3	339.3	339.5	339.0	338.4
11–2	Construction machinery and equipment	357.0	356.9	357.2	357.5	357.6	357.8	378.6	363.2	362.5	r361.7	362.4	362.0	362.3	362.5
11–3	Metalworking machinery and equipment	334.0	334.7	335.6	337.1	338.1	338.7	338.6	339.4	340.1	r340.9	341.5	341.6	342.4	343.6
11–4	General purpose machinery and equipment	314.1	315.5	315.9	316.0	316.5	316.9	318.3	318.9	319.8	320.5	321.1	321.9	322.2	322.4
11–6	Special industry machinery and equipment	348.7	352.8	351.1	351.5	351.8	352.4	355.7	357.1	357.6	358.4	359.0	359.7	360.6	361.2
11–7	Electrical machinery and equipment	248.7	249.4	249.8	250.8	251.5	251.7	253.0	253.7	253.7	253.2	253.9	253.8	253.3	253.5
11–9	Miscellaneous machinery	274.4	274.1	274.5	274.4	274.8	274.5	275.0	275.4	275.5	r276.6	277.7	278.1	277.9	277.9
12	Furniture and household durables	218.7	219.2	219 0	219.2	220.0	220.1	220.3	220.8	221.1	r221.7	221.4	221.5	221.7	221.8
12–1	Household furniture	242.1	242.7	243.4	244.3	245.1	245.5	246.9	247.4	247.6	r248.8	249.9	250.3	249.6	250.3
12–2	Commercial furniture	297.1	298.4	297.5	297.3	300.7	299.6	300.3	302.8	303.7	r306.3	305.9	307.1	308.6	309.3
12–3	Floor coverings	191.2	192.6	192.5	193.0	192.9	193.2	193.7	192.4	192.8	r192.9	190.6	190.5	191.2	191.4
12–4	Household appliances	211 0	211.9	211.6	211.1	210.9	211.3	211.2	211.2	211.7	r212.1	212.4	212.6	213.0	213.3
12–5	Home electronic equipment	83.8	83.8	83.1	83.1	83.1	82.7	80.8	81.9	81.0	80.9	79.9	79.4	79.1	78.6
12–6	Other household durable goods	318.6	316.8	316.8	317.7	320.5	320.7	322.5	322.7	324.1	r323.8	323.0	322.8	323.1	322.0
13	Nonmetallic mineral products	337.3	340.8	340.5	340.0	339.6	340.1	341.7	342.6	343.9	r345.5	347.1	348.5	348.7	349.7
13–11	Flat glass	224.5	219.6	219.7	219.9	218.5	218.6	221.3	220.9	220 9	r222.5	221.8	221.3	222.8	226.4
13–2	Concrete ingredients	325.7	328.4	328.2	327.6	328.5	329.6	331.0	333.5	335.4	r336.4	339.2	339.5	338.2	338.6
13–3	Concrete products	309.6	311.3	311.7	312.0	311 8	312.2	314.6	314.6	315.8	r316.7	320.2	321.5	321.1	322.7
13–4	Structural clay products, excluding refractories	286.8	288.2	289.4	289.5	289 6	289.7	291 3	291.6	291.8	r292.4	291.7	295.7	295.8	296.8
13–5	Refractories	361.2	361.6	361.6	361 6	365.6	365.6	365.9	365.9	366.9	r369.0	372.3	372.3	372.2	372.2
13–6	Asphalt roofing	399.5	408.4	408.0	409.1	410.1	412.1	409.6	407.5	406.1	r411.9	414.4	411.7	411.5	408.3
13–7	Gypsum products	346.7	359.5	355.4	339.0	334.4	330.6	328.6	344.3	336.4	r333.4	317.5	338.1	338.6	338.1
13–8	Glass containers	360.7	366.1	364.6	364.9	364.2	364.2	363.7	364.6	373.9	r374.3	372.3	374.4	378.4	381.5
13–9	Other nonmetallic minerals	500.1	511.4	509.8	508.9	505.8	507.3	514.2	514.1	514.1	r519.0	522.7	523.7	524.4	523.8
14	Transportation equipment (12/68 = 100)	262.7	262.3	257.8	265 0	265 7	265.0	266.8	268.1	267.7	r268.2	268.4	269.4	270.0	270.1
14–1	Motor vehicles and equipment	261 5	261.1	255.2	263.8	264.3	263.5	265.2	266.7	266.2	r266.2	266.5	267.7	267.6	267.7
14–4	Railroad equipment	355.6	357.7	357.6	358.8	358.9	358.9	359.9	361.8	362.7	r362.9	362.6	362.6	362.7	364.6
15	Miscellaneous products	295.9	298.2	296.7	296 5	296 5	296.7	299.2	300.7	300.6	r301.6	301.1	300.9	303.1	302.9
15–1	Toys, sporting goods, small arms, ammunition	227.1	226.5	227 0	227 4	227.6	227.7	228.0	231.0	231.3	231 2	230.2	229.9	229.9	229.8
15–2	Tobacco products	398.4	406.7	406.7	402 3	402.7	402.9	420.1	420.6	420.7	420.7	420.7	420.7	435.9	436.0
15–3	Notions	283.2	283.9	283.9	283.5	283.5	283.6	283.6	284.1	284.1	285.6	285.6	285.6	285.6	285.4
15–4	Photographic equipment and supplies	214.6	215.5	215.5	215 6	212 9	213.2	213.6	213 7	215.8	215.8	215.8	215.8	215.8	215.6
15–5	Mobile homes (12/74 = 100)	163.3	163.2	163.6	163.6	164.4	164.3	164.3	164 4	164 2	r164.3	164.6	164.8	164.7	165.0
15–9	Other miscellaneous products	350.5	353.2	346.9	348.5	349.6	350.1	347.2	350.7	348.5	r352.4	350.9	350.1	349.3	348.3

[1] Data for April 1985 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.
[2] Not available.
[3] Prices for natural gas are lagged 1 month.
[4] Includes only domestic production.
[5] Most prices for refined petroleum products are lagged 1 month.
[6] Some prices for industrial chemicals are lagged 1 month.
r = revised.

25. Producer Price Indexes, for special commodity groupings

[1967 = 100 unless otherwise specified]

Commodity grouping	Annual average 1984	1984					1985							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
All commodities—less farm products	313.8	314.4	313.3	314.2	314.7	314.1	314.2	313.4	313 4	314 3	315.5	315.2	314.6	313.6
All foods	269.2	269.6	268.6	266.6	267.3	268.5	267.8	269.7	267.7	r266 8	264.3	262.6	265.5	262.2
Processed foods	269.8	270.0	269.1	268.3	270.3	271.2	271.1	270.7	269.2	r268.0	267.6	265.7	267.0	264.2
Industrial commodities less fuels	287.6	288.3	287.6	288.7	289.1	288.9	290.2	290.6	290.7	r291.2	291.4	291.6	291.7	291.6
Selected textile mill products (12/75 = 100)	142.2	142.9	143.0	142.9	142.8	142.3	142.3	142.6	142.7	r142.8	142.3	141.4	141.6	142.2
Hosiery	147.6	148.0	148.0	148.1	148.1	148.0	148 1	148.4	148.7	r148.9	148.7	148.7	149.2	149.5
Underwear and nightwear	230.0	230.3	230 6	230.6	230.5	230.3	232.5	232.7	233 3	234.7	234.9	232.6	234.4	237.9
Chemicals and allied products, including synthetic rubber and fibers and yarns	289.7	290.2	289.9	290.0	290.0	289.4	290.6	291.1	291.3	r292.0	292.0	292.7	293.1	293.2
Pharmaceutical preparations	243.1	245.1	243.9	249.7	251.9	250.0	253.4	256.0	258.4	r260.1	263.6	261.2	266.4	265.9
Lumber and wood products, excluding millwork	318.5	315.0	311.4	307.6	307.4	309.6	311.5	308.8	308.5	r305.4	315.4	327.0	320.7	312.4
Steel mill products, including fabricated wire products	363.7	365.8	365.9	366.5	365.9	365.8	365.2	365.2	364.8	r365.0	365.5	365.2	364.4	364.1
Finished steel mill products, excluding fabricated wire products	365.5	367.5	367.5	368.1	367.5	367.4	366.8	366.7	366.3	r366.4	366.8	366.4	365.7	365.3
Finished steel mill products, including fabricated wire products	363.0	365.0	365.1	365.7	365.2	365.1	364.5	364.5	364.1	r364.3	364.8	364.5	363.8	363.4
Special metals and metal products	300.0	299.9	297.2	301.0	301.3	300.5	300.9	301.9	301.6	r302.4	302.3	302.1	301.8	301.9
Fabricated metal products	304.1	305.0	305.4	308.7	308.5	308.9	309.1	309.4	309.8	r310.1	310.1	310.4	310.6	311.0
Copper and copper products	186.0	183.3	182.5	178.1	183.0	180.1	179.3	184.8	182.1	r188.6	188.8	184.1	182.6	184.0
Machinery and motive products	286.3	286.8	284.8	288.4	289.0	288.8	291.0	291.4	291.3	r291.7	292.2	292.8	293.1	293.3
Machinery and equipment, except electrical	319.3	320.6	320.6	320.9	321.3	321.6	324.5	323.7	324.0	r324.6	325.4	325.9	326.2	326.4
Agricultural machinery, including tractors	353.6	357.5	355.2	354.8	354.0	354.8	355.9	355.5	355.7	r355.5	357.0	357.1	356.3	355.5
Metalworking machinery	364.9	365.1	366.6	368.8	370.4	371.4	370.3	371.6	373.3	r374.2	375.1	375.4	376.4	376.3
Total tractors	381.5	385.7	382.6	381.0	379.5	379.7	385.2	384.4	382.8	r382.6	385.2	383.5	383.4	382.6
Agricultural machinery and equipment less parts	341.0	344.3	342.3	342.0	341.5	342.3	343.3	343.0	343.3	r342.9	344.4	344.6	343.8	343.1
Farm and garden tractors less parts	360.4	367.0	362.3	359.9	357.6	358.0	360.4	359.0	359.6	r359.2	360.3	360.7	360.4	359.2
Agricultural machinery, excluding tractors less parts	348.5	350.1	349.8	350.8	351.3	352.5	352.4	352.9	352.7	r352.7	354.6	354.5	353.3	352.8
Construction materials	306.4	307.6	307.2	307.2	307.0	307.7	308.5	308.3	308.4	r308.7	310.6	312.7	312.0	311.0

[1]Data for April 1985 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

26. Producer Price Indexes, by durability of product

[1967 = 100]

Commodity grouping	Annual average 1984	1984					1985							
		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
Total durable goods	293.6	293.9	292.7	294.4	294.9	294.8	295.8	296.4	296.3	297.1	297.5	297.9	297.7	297.7
Total nondurable goods	323.3	323.7	322.3	320.9	322.1	321.3	320.1	319.0	317.7	318.4	319.2	318.1	317.3	314.1
Total manufactures	302.9	303.3	302.2	303.2	303.9	303.5	303.9	303.4	303.3	r304.2	305.0	305.3	304.6	303.7
Durable	293.9	294.5	293.2	295.1	295.6	295.5	296.5	297.0	296.9	r297.6	298.2	298.8	298.6	298.5
Nondurable	312.3	312.6	311.7	311.6	312.5	311.7	311.4	309.9	309.9	r310.8	312.0	311.9	310.7	308.9
Total raw or slightly processed goods	346.6	346.9	344.4	339.1	341.0	339.8	336.7	336.8	332.2	r332.1	331.2	327.2	327.4	320.6
Durable	266.7	259.6	260.6	255.9	254.2	252.2	256.0	259.2	261.2	r262.1	255.6	247.6	247.6	249.9
Nondurable	351.4	352.2	349.4	344.2	346.3	345.1	341.5	341.4	336.4	r336.2	335.7	332.0	332.2	324.8

[1]Data for April 1985 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

27. Producer Price Indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1984	1984					1985							
			Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[1]	May	June	July	Aug.
	MINING														
1092	Mercury ores (12/75 = 100)	264.3	249.1	257.1	271.6	276.6	267.9	264.1	262.1	262.1	260.0	243.7	256.6	264.6	270.8
1311	Crude petroleum and natural gas	913.7	928.3	918.2	916.2	906.2	901.6	880.3	878.0	865.7	r870.4	891.6	873.5	869.1	859.5
	MANUFACTURING														
2394	Canvas and related products (12/77 = 100)	151.1	150.6	152.1	152.1	152.1	152.1	152.1	152.1	152.1	r151.8	152.5	152.5	152.5	152.5
2655	Fiber cans, drums, and similar products (12/75 = 100)	193.7	194.7	194.7	194.8	197.8	197.8	199.1	200.0	200.0	200.0	199.9	200.0	199.9	199.9
3255	Clay refractories	371.9	371.4	371.4	371.4	378.8	378.8	379.4	379.4	381.3	r385.3	391.7	391.7	391.5	391.5
3259	Structural clay products, n.e.c.	232.6	232.3	232.4	232.4	232.4	232.5	237.1	237.0	236.9	r237.1	237.7	237.8	238.1	237.7
3263	Fine earthenware food utensils	377.5	374.0	374.8	375.9	378.2	379.4	382.3	383.9	385.2	r371.4	373.7	374.7	380.9	368.5
3269	Pottery products, n.e.c. (12/75 = 100)	192.1	187.6	197.7	195.2	195.3	195.3	198.8	199.0	199.3	r198.6	199.0	199.0	199.0	198.5
3274	Lime (12/75 = 100)	183.0	179.6	187.2	180.5	182.1	183.0	187.4	185.1	185.1	r182.1	182.5	185.6	186.3	186.8
3297	Nonclay refractories (12/74 = 100)	219.2	219.9	220.3	219.9	220.2	220.2	220.5	220.3	220.4	r220.3	220.5	220.6	220.6	220.7
3671	Electron tubes, receiving type	497.2	491.6	491.8	492.0	527.2	527.2	546 9	547.1	547.0	r546.9	547.1	547.1	546.9	547.1
3942	Dolls (12/75 = 100)	134.4	133.6	133.6	133.6	133.6	133.6	134.6	134.7	134.9	r134.9	134.5	134.5	134.5	134.5
3955	Carbon paper and inked ribbons (12/75 = 100)	145.7	146.7	146.7	139.7	139.7	139.7	139.7	139.4	129.5	128.6	126.3	126.3	116.0	114.9
3996	Hard surface floor coverings (12/75 = 100)	167.5	168.8	168.8	169.7	169.7	169.7	172.1	172.1	172.1	172.1	172.1	173.5	175.2	175.2

[1]Data for April 1985 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r = revised.

PRODUCTIVITY DATA

PRODUCTIVITY DATA are compiled by the Bureau of Labor Statistics from establishment data and from measures of compensation and output supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definitions

Output is the constant dollar gross product produced by the particular sector. **Output per hour of all persons** (labor productivity) measures the value of goods and services in constant prices produced per hour of labor. **Output per unit of capital services** (capital productivity) measures the value of goods and services in constant dollars per unit of capital services input.

Multifactor productivity measures the output per unit of combined labor and capital input. The traditional measure of output per hour reflects changes in capital per hour and a combination of other factors—such as, changes in technology, shifts in the composition of the labor force, changes in capacity utilization, research and development, skill and efforts of the work force, management, and so forth. The multifactor productivity measure differs from the familiar BLS measure of output per hour of all persons in that it excludes the effects of the substitution of capital for labor.

Compensation per hour includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

Unit labor costs measure the labor compensation costs required to produce a unit of output and is derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current dollar gross product and dividing by output. **Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and the value of inventory adjustments per unit of output.

The **implicit price deflator** is the price index for the gross product of the sector reported. It is derived by dividing the current dollar gross product by the constant dollar figures.

Hours of all persons measures the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all employee hour** describes labor productivity in nonfinancial corporations where there are no self-employed. The **capital services** input index used in the multifactor productivity computation is developed by BLS from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset. **Combined units of labor and capital input** are computed by combining changes in labor and capital inputs with weights which represent each component's share of total output. The indexes for capital services and combined units of labor and capital are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

In the business sector and the nonfarm business sector, the output measure employed in the computation of output per hour is constructed from Gross Domestic Product rather than Gross National Product. Multifactor productivity measures (table 28) for the *private* business and *private* nonfarm business sectors differ from the business and nonfarm business sector measures used in the traditional labor productivity indexes (tables 29–32) in that they exclude the activities of government enterprises. There is no difference in the sector definition for manufacturing.

Output measures for the business sectors are derived from data supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hours data are from the Bureau of Labor Statistics and the Bureau of Economic Analysis.

The productivity and associated cost measures in the tables describe the relationship between output in real terms and the labor time and capital services involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input. Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; capital investment; level of output; utilization of capacity, energy, and materials; the organization of production; managerial skill; and the characteristics and efforts of the work force. For a more complete description of the methodology underlying the multifactor productivity measures, see Bulletin 2178, "Trends in Multifactor Productivity, 1948–81" (September 1983).

28. Annual indexes of multifactor productivity and related measures, selected years, 1950–83

[1977 = 100]

Item	1950	1960	1970	1973	1974	1975	1976	1978	1979	1980	1981	1982	1983
PRIVATE BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	49.7	64.8	86.1	94.8	92.5	94.5	97.6	100.5	99.3	98.7	100.6	100.8	103.7
Output per unit of capital services	98.6	98.5	98.5	103.0	96.5	92.0	96.1	101.8	100.3	95.6	94.1	89.6	92.3
Multifactor productivity	63.6	75.4	90.2	97.5	93.8	93.6	97.1	101.0	99.7	97.6	98.3	96.8	99.6
Output	39.5	53.3	78.3	91.8	89.9	88.0	93.7	105.5	107.9	106.4	109.2	106.3	111.1
Inputs:													
Hours of all persons	79.4	82.2	90.8	96.8	97.2	93.1	95.9	105.0	108.6	107.8	108.5	105.4	107.2
Capital services	40.1	54.1	79.4	89.1	93.1	95.7	97.5	103.6	107.5	111.4	116.0	118.7	120.3
Combined units of labor and capital input	62.1	70.7	86.7	94.1	95.8	94.0	96.5	104.5	108.2	109.0	111.0	109.8	111.5
Capital per hour of all persons	50.4	65.8	87.4	92.0	95.9	102.8	101.6	98.7	98.9	103.3	106.9	112.6	112.3
PRIVATE NONFARM BUSINESS SECTOR													
Productivity:													
Output per hour of all persons	55.6	68.0	86.8	95.3	92.9	94.8	97.8	100.6	99.0	98.2	99.6	99.9	103.5
Output per unit of capital services	98.2	98.4	98.6	103.2	96.5	91.7	96.1	101.9	100.1	95.2	93.2	88.7	91.9
Multifactor productivity	68.1	77.6	90.7	97.9	94.1	93.6	97.2	101.0	99.4	97.2	97.4	95.9	99.3
Output	38.3	52.3	77.8	91.7	89.7	87.6	93.6	105.7	108.0	106.4	108.7	105.9	111.3
Inputs:													
Hours of all persons	69.0	77.0	89.7	96.2	96.5	92.4	95.7	105.1	109.1	108.4	109.1	106.0	107.6
Capital services	39.0	53.2	78.9	88.8	93.0	95.6	97.4	103.7	107.9	111.7	116.6	119.4	121.2
Combined units of labor and capital input	56.2	67.4	85.9	93.6	95.3	93.5	96.3	104.6	108.7	109.5	111.6	110.4	112.0
Capital per hour of all persons	56.6	69.1	88.0	92.4	96.3	103.4	101.8	98.7	98.9	103.1	106.8	112.6	112.6
MANUFACTURING													
Productivity:													
Output per hour of all persons	49.4	60.0	79.2	93.0	90.8	93.4	97.6	100.9	101.6	101.7	104.9	107.1	111.6
Output per unit of capital services	94.5	88.0	91.8	108.2	99.6	89.4	96.1	101.5	99.5	90.7	89.9	82.9	87.6
Multifactor productivity	59.9	67.0	82.3	96.8	93.1	92.2	97.1	101.1	101.0	98.8	100.8	100.3	104.9
Output	38.6	50.7	77.0	95.9	91.9	85.4	93.6	105.3	108.2	103.5	106.1	99.3	104.4
Inputs:													
Hours of all persons	78.2	84.4	97.3	103.1	101.2	91.4	95.9	104.4	106.5	101.7	101.1	92.7	93.5
Capital services	40.9	57.5	83.9	88.6	92.2	95.5	97.4	103.8	108.8	114.1	118.0	119.8	119.2
Combined units of labor and capital input	64.5	75.6	93.5	99.0	98.7	92.6	96.3	104.2	107.1	104.8	105.2	99.0	99.5
Capital per hour of all persons	52.3	68.2	86.2	85.9	91.1	104.5	101.6	99.4	102.1	112.2	116.7	129.2	127.5

29. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–84

[1977 = 100]

Item	1950	1955	1960	1965	1970	1975	1978	1979	1980	1981	1982	1983	1984
Business sector:													
Output per hour of all persons	50.4	58.3	65.2	78.3	86.2	94.6	100.5	99.3	98.8	100.7	100.9	103.7	107.0
Compensation per hour	20.0	26.4	33.9	41.7	58.2	85.6	108.5	118.7	131.1	143.4	155.0	161.7	168.6
Real compensation per hour	50.5	59.7	69.5	80.1	90.8	96.4	100.8	99.1	96.4	95.5	97.3	98.4	98.4
Unit labor costs	39.8	45.2	52.1	53.3	67.5	90.5	108.0	119.5	132.6	142.4	153.6	156.0	157.6
Unit nonlabor payments	43.4	47.6	50.6	57.6	63.2	90.4	106.7	112.8	119.3	136.7	136.8	145.5	157.0
Implicit price deflator	41.0	46.0	51.6	54.7	66.0	90.4	107.5	117.2	128.1	140.4	147.9	152.4	157.4
Nonfarm business sector:													
Output per hour of all persons	56.3	62.8	68.3	80.5	86.8	94.8	100.6	99.0	98.3	99.8	100.0	103.4	106.2
Compensation per hour	21.9	28.3	35.7	42.8	58.7	86.1	108.6	118.4	130.6	143.1	154.5	162.0	168.7
Real compensation per hour	55.1	64.0	73.1	82.3	91.5	96.9	100.8	98.8	96.0	95.3	97.0	98.6	98.4
Unit labor costs	38.8	45.1	52.3	53.2	67.6	90.8	108.0	119.5	132.8	143.5	154.5	156.6	158.8
Unit nonlabor payments	42.7	47.8	50.4	58.0	63.8	88.5	105.3	110.4	118.6	135.0	136.9	147.0	156.9
Implicit price deflator	40.1	46.0	51.6	54.8	66.3	90.0	107.1	116.5	128.1	140.6	148.6	153.4	158.2
Nonfinancial corporations:													
Output per hour of all persons	(1)	(1)	68.0	82.0	87.4	95.5	100.8	100.6	99.7	101.6	102.6	106.1	108.5
Compensation per hour	(1)	(1)	37.0	43.9	59.4	86.1	108.4	118.6	130.8	143.1	154.6	161.0	166.6
Real compensation per hour	(1)	(1)	75.8	84.3	92.7	97.0	100.7	99.0	96.2	95.3	97.0	97.9	97.2
Unit labor costs	(1)	(1)	54.4	53.5	68.0	90.2	107.5	117.8	131.2	140.9	150.6	151.8	153.6
Unit nonlabor payments	(1)	(1)	54.6	60.8	63.1	90.8	104.2	106.9	117.4	135.1	138.1	149.1	158.8
Implicit price deflator	(1)	(1)	54.5	56.1	66.3	90.4	106.4	114.1	126.4	138.9	146.3	150.9	155.4
Manufacturing:													
Output per hour of all persons	49.4	56.4	60.0	74.6	79.2	93.4	100.9	101.6	101.7	104.9	107.1	111.6	115.6
Compensation per hour	21.5	28.8	36.7	42.8	57.6	85.5	108.3	118.8	132.7	145.2	158.0	163.4	169.4
Real compensation per hour	54.0	65.1	75.1	82.3	89.8	96.2	100.6	99.2	97.6	96.8	99.2	99.4	98.8
Unit labor costs	43.4	51.0	61.1	57.5	72.7	91.5	107.3	117.0	130.5	138.4	147.6	146.4	146.5
Unit nonlabor payments	54.3	58.6	61.1	69.4	65.1	87.3	102.7	99.9	97.9	111.6	110.5	128.8	140.3
Implicit price deflator	46.6	53.2	61.1	61.0	70.5	90.3	106.0	112.0	120.9	130.6	136.7	141.2	144.7

[1] Not available.

30. Annual changes in productivity, hourly compensation, unit costs, and prices, 1974–84

Item	Year											Annual rate of change	
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1950–84	1974–84
Business sector:													
Output per hour of all persons	−2.4	2.2	3.3	2.4	0.5	−1.2	−0.5	1.9	0.2	2.7	3.2	2.2	1.5
Compensation per hour	9.4	9.6	8.5	7.7	8.5	9.4	10.4	9.4	8.1	4.3	4.2	6.5	8.0
Real compensation per hour	−1.4	0.5	2.6	1.2	0.8	−1.7	−2.7	−0.9	1.9	1.1	0.0	2.0	0.3
Unit labor costs	12.1	7.3	5.1	5.1	8.0	10.7	11.0	7.3	7.9	1.6	1.0	4.1	6.4
Unit nonlabor payments	4.4	15.1	4.0	6.4	6.7	5.8	5.7	14.6	0.1	6.3	7.9	3.9	7.2
Implicit price deflator	9.5	9.8	4.7	5.6	7.5	9.0	9.3	9.6	5.3	3.0	3.2	4.0	6.7
Nonfarm business sector:													
Output per hour of all persons	−2.5	2.0	3.2	2.2	0.6	−1.5	−0.7	1.5	0.2	3.5	2.7	1.9	1.3
Compensation per hour	9.4	9.6	8.1	7.5	8.6	9.0	10.3	9.6	8.0	4.9	4.1	6.2	8.0
Real compensation per hour	−1.4	0.4	2.2	1.0	0.8	−2.0	−2.8	−0.7	1.7	1.6	−0.1	1.7	0.2
Unit labor costs	12.2	7.5	4.7	5.2	8.0	10.7	11.1	8.0	7.7	1.4	1.4	4.2	6.5
Unit nonlabor payments	5.9	16.7	5.7	6.9	5.3	4.8	7.4	13.8	1.4	7.4	6.7	3.9	7.5
Implicit price deflator	10.2	10.3	5.1	5.7	7.1	8.8	10.0	9.8	5.7	3.2	3.1	4.1	6.8
Nonfinancial corporations:													
Output per hour of all employees	−3.7	2.9	2.9	1.8	0.8	−0.2	−0.9	1.9	1.0	3.3	2.3	[1]	1.5
Compensation per hour	9.4	9.6	7.9	7.6	8.4	9.4	10.3	9.4	8.0	4.2	3.5	[1]	8.3
Real compensation per hour	−1.5	0.4	2.0	1.1	0.7	−1.7	−2.8	−0.9	1.8	0.9	−0.8	[1]	0.2
Unit labor costs	13.6	6.5	4.9	5.7	7.5	9.6	11.3	7.4	6.9	0.8	1.1	[1]	6.7
Unit nonlabor payments	7.1	20.1	4.6	5.3	4.2	2.6	9.8	15.1	2.3	7.9	6.5	[1]	7.8
Implicit price deflator	11.4	10.9	4.8	5.6	6.4	7.2	10.8	9.8	5.3	3.1	3.0	[1]	7.1
Manufacturing:													
Output per hour of all persons	−2.4	2.9	4.5	2.5	0.9	0.7	0.2	3.1	2.1	4.3	3.5	2.5	2.4
Compensation per hour	10.6	11.9	8.0	8.3	8.3	9.7	11.7	9.4	8.8	3.4	3.6	6.3	8.3
Real compensation per hour	−0.3	2.5	2.1	1.8	0.6	−1.4	−1.6	−0.9	2.5	0.2	−0.6	1.8	0.3
Unit labor costs	13.3	8.8	3.4	5.7	7.3	9.0	11.5	6.1	6.6	−0.8	−0.1	3.6	5.7
Unit nonlabor payments	−1.8	25.9	7.5	6.5	2.7	−2.6	−2.1	14.1	−1.0	16.5	8.9	2.8	7.3
Implicit price deflator	9.0	13.1	4.6	6.0	6.0	5.7	7.9	8.0	4.7	3.3	2.5	3.4	6.1

[1] Not available.

31. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted

[1977 = 100]

Item	Annual average		Quarterly indexes										
			1982	1983				1984				1985	
	1983	1984	IV	I	II	III	IV	I	II	III	IV	I	II
Business sector:													
Output per hour of all persons	103.7	107.0	101.6	102.2	103.6	104.3	104.7	105.7	107.0	107.2	108.0	106.9	r107.3
Compensation per hour	161.7	168.6	158.4	160.2	161.0	161.8	164.2	166 7	167.5	169.3	171.1	173.1	r174.5
Real compensation per hour	98.4	98.4	98.0	99.0	98.5	97.9	98.4	98.6	98.2	98.3	98.5	98.9	r98.6
Unit labor costs	156.0	157.6	155.9	156.8	155.4	155.1	156.8	157.7	156.5	158.0	158.4	161.9	r162.7
Unit nonlabor payments	145.5	157.0	136.5	139.8	144.6	147.9	149.1	151.6	157.2	158.5	160.2	159.1	r160.0
Implicit price deflator	152.4	157.4	149.3	151.0	151.7	152.7	154.2	155.6	156.7	158.1	159.0	160.9	r161.7
Nonfarm business sector:													
Output per hour of all persons	103.4	106.2	100.5	101.6	103.6	104.1	104.4	105.2	106.6	106.3	106.9	106.0	r106.3
Compensation per hour	162.0	168.7	157.9	160.1	161.5	162.4	164.0	166.5	168.0	169.5	171.0	173.1	r174.5
Real compensation per hour	98.6	98.4	97.7	99.0	98.8	98.3	98.3	98.4	98.4	98.4	98.5	98.9	98.7
Unit labor costs	156.6	158.8	157.1	157.6	155.9	155.9	157.1	158.3	157.6	159.5	160.0	163.3	r164.2
Unit nonlabor payments	147.0	156.9	136.4	140.6	146.4	149.4	151.4	152.2	156.8	158.0	160.3	160.3	r161.7
Implicit price deflator	153.4	158.2	150.2	151.9	152.7	153.8	155.2	156.3	157.3	159.0	160.1	162.3	163.4
Nonfinancial corporations:													
Output per hour of all employees	106.1	108.5	103.2	104.0	105.8	107.2	107.2	108 1	108.9	108 2	108.8	108.1	p108.1
Compensation per hour	161.0	166.6	157.7	159.2	160.6	161.8	162.6	164.8	165.8	167.1	168.7	170.3	p171.6
Real compensation per hour	97.9	97.2	97.5	98.4	98.2	97.9	97.4	97 5	97.2	97.1	97.1	97.3	p97.0
Total unit costs	155.2	156.4	157.0	156.7	155.2	154.4	154.7	155.0	155.0	157.5	158.0	160.2	p161.6
Unit labor costs	151.8	153 6	152.9	153.1	151.7	150.9	151.7	152 5	152.3	154.5	155.0	157.5	p158.8
Unit nonlabor costs	164.9	164.3	168.8	167.0	165.1	164.4	163.3	162.0	162.8	165.9	166.4	168 1	p169.8
Unit profits	117.2	147.6	75.6	92.5	111.8	126.6	135.9	143 2	151.1	145.3	r150.7	150.4	p149.3
Implicit price deflator	150.9	155.4	147.7	149.4	150.2	151.2	152.6	153.6	154.6	156.1	157.1	159.1	p160.2
Manufacturing:													
Output per hour of all persons	111.6	115.6	108.0	110.0	110.9	113.0	112.7	114.2	114.8	116.7	116.5	116.7	118.8
Compensation per hour	163.4	169.4	161.0	162.7	163.0	163.5	164.6	167.1	168.3	169.9	172.1	174.4	r176.5
Real compensation per hour	99.4	98.8	99.6	100.6	99.6	98.9	98.6	98.8	98.6	98.7	99.1	99.6	99.7
Unit labor costs	146.4	146.5	149.2	147.9	147.0	144.7	146.1	146.3	146.6	145.5	147.7	149.5	r148.6

r = revised.

p = preliminary.

32. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, seasonally adjusted at annual rate

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	IV 1983 to I 1984	I 1984 to II 1984	II 1984 to III 1984	III 1984 to IV 1984	IV 1984 to I 1985	I 1985 to II 1985	I 1983 to I 1984	II 1983 to II 1984	III 1983 to III 1984	IV 1983 to IV 1984	I 1984 to I 1985	II 1984 to II 1985
Business sector:												
Output per hour of all persons	4.0	4.9	0.6	3.1	−3.9	r1.3	3.5	3.3	2.7	3.2	1.1	r0.3
Compensation per hour	6.2	1.9	4.4	4.4	4.8	3.3	4.1	4.0	4.6	4.2	3.8	4.2
Real compensation per hour	0.8	−1.8	0.7	0.8	1.4	r−0.9	−0.4	−0.3	0.4	0.1	0.3	0.5
Unit labor costs	2.1	−2.9	3.7	1.2	9.1	r1.9	0.6	0.7	1.9	1.0	2.7	r3.9
Unit nonlabor payments	7.0	15.4	3.4	4.3	−2.6	r2.3	8.4	8.7	7.1	7.4	4.9	r1.8
Implicit price deflator	3.7	2.9	3.6	2.2	5.0	r2.0	3.0	3.3	3.6	3.1	3.4	3.2
Nonfarm business sector:												
Output per hour of all persons	2.9	5.5	−1.1	2.2	−3.1	r1.0	3.5	2.9	2.1	2.4	0.8	r−0.3
Compensation per hour	6.1	3.7	3.6	3.7	5.0	r3.3	4.0	4.0	4.4	4.3	4.0	3.9
Real compensation per hour	0.7	0.0	0.1	0.1	r1.7	r−0.8	−0.5	−0.3	0.2	0.2	0.4	0.2
Unit labor costs	3.1	−1.7	4.7	1.4	8.4	r2.3	0.4	1.1	2.3	1.9	3.1	4.2
Unit nonlabor payments	2.3	12.5	3.1	5.9	0.1	r3.6	8.3	7.1	5.7	5.9	5.3	r3.2
Implicit price deflator	2.8	2.8	4.2	2.9	5.5	r2.8	2.9	3.0	3.4	3.2	3.8	3.8
Nonfinancial corporations:												
Output per hour of all employees	3.6	2.8	−2.5	2.5	−2.5	p−0.3	4.0	2.9	0.9	1.6	0.0	p−0.7
Compensation per hour	5.7	2.4	3.2	3.7	3.9	p2.9	3.6	3.3	3.3	3.8	3.3	p3.5
Real compensation per hour	0.4	−1.3	−0.4	0.2	0.6	p−1.3	−0.9	−1.0	−0.9	−0.3	0.2	p−0.2
Total units costs	0.6	0.2	6.5	1.2	5.9	p3.5	−1.1	−0.1	2.0	2.1	3.4	p4.2
Unit labor costs	2.0	−0.4	5.9	1.2	6.6	p3.2	−0.4	0.4	2.4	2.2	3.3	p4.2
Unit nonlabor costs	−3.2	2.0	8.0	1.1	4.0	p4.1	−3.0	−1.4	0.9	1.9	3.8	p4.3
Unit profits	23.4	23.8	−14.5	16.0	−1.0	p−2.7	54.8	35.2	14.7	10.9	5.0	p−1.2
Implicit price deflator	2.7	2.6	3.9	2.7	5.1	p2.8	2.8	2.9	3.2	3.0	3.6	p3.6
Manufacturing:												
Output per hour of all persons	5.5	2.2	6.8	−0.6	0.4	7.5	3.8	3.6	3.3	3.4	2.1	3.5
Compensation per hour	6.2	2.9	3.7	5.2	5.6	r4.8	2.7	3.3	3.9	4.5	4.4	4.8
Real compensation per hour	0.8	−0.8	0.1	1.6	2.2	r0.6	−1.7	−1.0	−0.3	0.4	0.8	1.1
Unit labor costs	0.6	−0.7	−2.8	5.9	5.1	r−2.5	−1.0	−0.3	r0.6	1.0	2.2	1.3

r = revised. p = preliminary.

DATA FOR THE EMPLOYMENT COST INDEX are reported to the Bureau of Labor Statistics by a sample of 2,000 private nonfarm establishments and 750 State and local government units selected to represent total employment in those sectors. On average, each reporting unit provides wage and compensation information on five well-specified occupations.

Data on negotiated wage and benefit changes are obtained from contracts on file at the Bureau, direct contact with the parties, and secondary sources.

Definitions

The **Employment Cost Index** (ECI) is a quarterly measure of the average change in the cost of employing labor. The rate of total compensation, which comprises wages, salaries, and employer costs for employee benefits, is collected for workers performing specified tasks. Employment in each occupation is held constant over time for all series produced in the ECI, except those by region, bargaining status, and area. As a consequence, only changes in compensation are measured. Industry and occupational employment data from the 1970 Census of Population are used in deriving constant weights for the ECI. While holding total industry and occupational employment fixed, in the estimation of indexes by region, bargaining status, and area, the employment in those measures is allowed to vary over time in accord with changes in the sample. The rate of change (in percent) is available for wages and salaries, as well as for total compensation. Data are collected for the pay period including the 12th day of the survey months of March, June, September, and December. The statistics are neither annualized nor adjusted for seasonal influence.

Wages and salaries consist of earnings before payroll deductions, excluding premium pay for overtime, work on weekends and holidays, and shift differentials. Production bonuses, incentive earnings, commissions, and cost-of-living adjustments are included; nonproduction bonuses are included with other supplemental pay items in the benefits category; and payments-in-kind, free room and board, and tips are excluded. *Benefits* include supplemental pay, insurance, retirement and savings plans, and hours-related and legally required benefits.

Data on negotiated wage changes apply to private nonfarm industry collective bargaining agreements covering 1,000 workers or more. Data on compensation changes apply only to those agreements covering 5,000 workers or more. *First-year* wage or compensation changes refer to average negotiated changes for workers covered by settlements reached in the period and implemented within the first 12 months after the effective date of the agreement. *Changes over the life of the agreement* refer to all adjustments specified in the contract, expressed as an average annual rate. These measures exclude wage changes that may occur under cost-of-living adjustment clauses, that are triggered by movements in the Consumer Price Index. *Wage-rate changes* are expressed as a percent of straight-time hourly earnings; *compensation changes* are expressed as a percent of total wages and benefits.

Effective wage adjustments reflect all negotiated changes implemented in the reference period, regardless of the settlement date. They include changes from settlements reached during the period, changes deferred from contracts negotiated in an earlier period, and cost-of-living adjustments. The data also reflect contracts providing for no wage adjustment in the period. Effective adjustments and each of their components are prorated over all workers in bargaining units with at least 1,000 workers.

Notes on the data

The Employment Cost Index data series began in the fourth quarter of 1975, with the quarterly percent change in wages and salaries in the private nonfarm sector. Data on employer costs for employee benefits were included in 1980, to produce a measure of the percent change in employers' cost for employees' total compensation. State and local government units were added to the ECI coverage in 1981, providing a measure of total compensation change in the civilian nonfarm economy.

Data for the broad white-collar, blue-collar, and service worker groups, and the manufacturing, nonmanufacturing, and service industry groups are presented in the ECI. Additional occupation and industry detail are provided for the wages and salaries component of total compensation in the private nonfarm sector. For State and local government units, additional industry detail is shown for both total compensation and its wages and salaries component.

Historical indexes (June 1981 = 100) of the quarterly rates of changes presented in the ECI are also available.

For a more detailed discussion of the ECI, see chapter 11, "The Employment Cost Index," of the *BLS Handbook of Methods* (Bulletin 2134–1), and the *Monthly Labor Review* articles: "Employment Cost Index: a measure of change in the 'price of labor,'" July 1975; "How benefits will be incorporated into the Employment Cost Index," January 1978; and "The Employment Cost Index: recent trends and expansion," May 1982.

Additional data for the ECI and other measures of wage and compensation changes appear in *Current Wage Developments*, a monthly publication of the Bureau.

33. Employment Cost Index, by occupation and industry group

[June 1981 = 100]

Series	1983			1984				1985		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	June 1985	
Civilian workers[1]	114.5	116.5	117.8	119.8	120.8	122.4	123.9	125.5	126.4	0.7	4.6
Workers, by occupational group											
White-collar workers	114.9	117.6	118.9	120.9	122.1	124.0	125.5	127.3	128.3	.8	5.1
Blue-collar workers	113.6	114.8	115.8	117.7	118.6	119.6	120.9	122.2	123.1	.7	3.8
Service workers	115.1	116.7	119.1	122.0	122.1	124.6	126.8	127.8	128.0	.2	4.8
Workers, by industry division											
Manufacturing	113.5	115.0	116.0	117.9	119.1	120.4	122.0	123.9	124.6	.6	4.6
Nonmanufacturing	114.9	117.2	118.6	120.7	121.6	123.3	124.8	126.2	127.2	.8	4.6
Services	117.1	121.1	122.6	125.0	125.5	128.8	130.9	131.9	132.6	.5	5.7
Public administration[2]	117.0	119.8	121.4	122.9	123.7	126.9	128.6	130.1	130.3	.2	5.3
Private industry workers	113.9	115.6	117.0	119.0	120.1	121.1	122.7	124.2	125.2	.8	4.2
Workers, by occupational group											
White-collar workers	114.2	116.5	117.9	119.9	121.4	122.4	123.9	125.8	127.1	1.0	4.7
Blue-collar workers	113.5	114.6	115.7	117.5	118.4	119.3	120.6	121.9	122.8	.7	3.7
Service workers	114.6	115.1	117.9	121.5	121.2	123.2	125.7	126.3	126.5	.2	4.4
Workers, by industry division											
Manufacturing	113.5	115.0	116.0	117.9	119.1	120.4	122.0	123.9	124.6	.6	4.6
Nonmanufacturing	114.2	116.0	117.5	119.6	120.7	121.6	123.1	124.4	125.6	1.0	4.1
State and local government workers	117.1	120.8	122.0	123.9	124.4	128.8	130.1	131.7	132.0	.2	6.1
Workers, by occupational group											
White-collar workers	117.5	121.5	122.6	124.5	125.0	129.7	131.1	132.5	132.9	.3	6.3
Blue-collar workers	115.8	118.0	119.2	121.9	122.3	125.0	125.9	128.1	128.5	.3	5.1
Workers, by industry division											
Services	117.4	121.7	122.6	124.5	125.0	129.9	131.3	132.8	133.2	.3	6.6
Schools	116.9	121.9	122.6	124.5	124.7	130.6	132.0	133.4	133.7	.2	7.2
Elementary and secondary	117.4	123.3	123.9	125.4	125.7	132.1	133.5	134.4	134.6	.1	7.1
Hospitals and other services[3]	118.8	121.1	122.6	124.4	125.7	127.9	129.2	131.1	131.5	.3	4.6
Public administration[2]	117.0	119.8	121.4	122.9	123.7	126.9	128.6	130.1	130.3	.2	5.3

[1] Excludes farm, household, and Federal workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] Includes, for example, library, social, and health services.

34. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1981 = 100]

Series	1983			1984				1985		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	June 1985	
Civilian workers[1]	113.4	115.3	116.5	117.9	118.8	120.3	121.7	123.1	124.2	0.9	4.5
Workers, by occupational group											
White-collar workers	114.2	116.7	117.9	119.3	120.4	122.2	123.5	125.2	126.4	1.0	5.0
Blue-collar workers	112.0	113.1	114.0	115.3	116.1	117.0	118.2	119.3	120.5	1.0	3.8
Service workers	113.9	115.1	117.4	120.0	119.8	122.3	124.3	124.8	125.3	.4	4.6
Workers, by industry division											
Manufacturing	112.0	113.3	114.5	115.7	116.8	118.0	119.5	121.0	122.3	1.1	4.7
Nonmanufacturing	114.0	116.1	117.4	118.9	119.7	121.3	122.6	123.9	125.0	.9	4.4
Services	116.3	120.1	121.3	123.3	123.8	127.2	128.9	129.7	130.5	.6	5.4
Public administration[2]	115.4	118.2	119.4	120.4	121.3	124.4	125.7	127.0	127.2	.2	4.9
Private industry workers	112.9	114.5	115.8	117.2	118.2	119.2	120.6	122.0	123.3	1.1	4.3
Workers, by occupational group											
White-collar workers	113.6	115.9	117.2	118.5	119.9	120.9	122.3	124.0	125.5	1.2	4.7
Professional and technical workers	115.9	119.9	120.4	122.2	123.8	125.2	127.3	127.7	128.7	.8	4.0
Managers and administrators	114.0	114.8	115.7	118.0	119.2	121.0	122.2	123.8	126.5	2.2	6.1
Salesworkers	107.1	108.4	111.2	110.2	111.9	110.5	111.6	116.3	117.4	.9	4.9
Clerical workers	114.6	116.7	118.3	119.8	120.7	122.0	122.9	124.7	125.6	.7	4.1
Blue-collar workers	111.9	112.9	113.9	115.1	115.9	116.7	118.0	119.1	120.3	1.0	3.8
Craft and kindred workers	113.4	114.3	115.4	116.5	117.3	118.0	119.4	120.8	122.0	1.0	4.0
Operatives, except transport	111.1	112.3	113.6	114.9	115.8	116.6	117.9	118.9	120.1	1.0	3.7
Transport equipment operatives	110.3	110.7	110.2	111.7	112.7	113.4	114.0	114.5	115.7	1.0	2.7
Nonfarm laborers	109.8	110.8	112.1	112.9	114.1	114.7	115.9	116.7	118.5	1.5	3.9
Service workers	113.5	113.7	116.5	119.8	119.3	121.2	123.7	123.8	124.4	.5	4.3
Workers, by industry division											
Manufacturing	112.0	113.3	114.5	115.7	116.8	118.0	119.5	121.0	122.3	1.1	4.7
Durables	111.8	112.9	114.4	115.7	116.6	117.7	119.1	120.6	122.0	1.2	4.6
Nondurables	112.3	113.9	114.6	115.8	117.1	118.6	120.2	121.6	122.6	.8	4.7
Nonmanufacturing	113.4	115.2	116.5	118.0	119.0	119.9	121.2	122.6	123.9	1.1	4.1
Construction	112.1	112.2	112.9	113.3	114.0	114.3	114.4	115.5	116.6	1.0	2.3
Transportation and public utilities	114.7	115.7	116.8	118.5	119.3	119.9	120.7	121.7	122.8	.9	2.9
Wholesale and retail trade	110.8	111.5	112.3	114.3	116.0	116.5	118.1	118.8	121.1	1.9	4.4
Wholesale trade	114.1	115.7	116.5	118.2	120.0	120.7	122.9	123.7	126.8	2.5	5.7
Retail trade	109.4	109.9	110.6	112.8	114.4	114.9	116.2	116.9	118.9	1.7	3.9
Finance, insurance, and real estate	111.1	113.5	116.9	116.1	116.9	115.3	115.8	122.0	121.7	−.2	4.1
Services	116.6	120.4	121.9	124.2	124.7	127.1	129.5	129.9	131.0	.8	5.1
State and local government workers	115.7	119.2	120.0	121.6	122.0	126.1	127.1	128.4	128.7	.2	5.5
Workers, by occupational group											
White-collar workers	116.1	119.8	120.6	122.2	122.5	127.1	128.0	129.3	129.6	.2	5.8
Blue-collar workers	114.3	116.4	116.9	119.1	119.6	121.9	122.5	124.2	124.5	.2	4.1
Workers, by industry division											
Services	115.9	119.8	120.6	122.2	122.5	127.2	128.1	129.4	129.7	.2	5.9
Schools	115.4	119.9	120.6	122.2	122.3	127.8	128.7	129.9	130.2	.2	6.5
Elementary and secondary	115.8	121.1	121.7	122.9	123.0	129.3	130.2	130.8	131.1	.2	6.6
Hospitals and other services[3]	117.7	119.7	120.6	121.9	123.1	125.1	125.9	127.7	128.0	.2	4.0
Public administration[2]	115.4	118.2	119.4	120.4	121.3	124.4	125.7	127.0	127.2	.2	4.9

[1] Excludes farm, household, and Federal workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] Includes, for example, library, social, and health services.

35. Employment Cost Index, private industry workers, by bargaining status, region, and area size

[June 1981 = 100]

Series	1983			1984				1985		Percent change	
										3 months ended	12 months ended
	June	Sept.	Dec.	March	June	Sept.	Dec.	March	June	June 1985	
COMPENSATION											
Workers, by bargaining status[1]											
Union	116.0	117.8	118.8	120.6	121.7	122.6	123.9	124.8	125.5	0.6	3.1
Manufacturing	114.8	116.3	117.2	119.3	120.5	121.6	123.2	124.2	124.2	.0	3.1
Nonmanufacturing	117.1	119.2	120.4	121.9	122.8	123.6	124.5	125.3	126.6	1.0	3.1
Nonunion	112.8	114.4	115.9	118.0	119.2	120.3	121.9	123.8	125.0	1.0	4.9
Manufacturing	112.3	113.8	114.9	116.6	117.9	119.3	120.8	123.6	124.8	1.0	5.9
Nonmanufacturing	113.0	114.7	116.4	118.6	119.8	120.7	122.4	123.9	125.1	1.0	4.4
Workers, by region[1]											
Northeast	114.3	116.0	117.5	118.9	120.7	122.4	123.8	125.1	126.4	1.0	4.7
South	113.5	115.6	117.1	119.7	120.7	120.7	122.2	124.2	125.2	.8	3.7
North Central	112.5	113.9	114.7	117.2	117.9	119.7	120.8	122.0	122.7	.6	4.1
West	116.6	118.0	120.0	121.0	122.2	122.5	124.9	126.8	127.9	.9	4.7
Workers, by area size[1]											
Metropolitan areas	114.2	116.0	117.4	119.4	120.6	121.5	123.2	124.7	125.7	.8	4.2
Other areas	112.3	113.4	114.5	116.7	117.4	119.0	119.8	121.4	122.5	.9	4.3
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	114.2	116.0	116.9	118.1	119.0	119.8	120.9	121.7	123.0	1.1	3.4
Manufacturing	112.3	113.7	114.8	116.1	117.1	118.1	119.5	120.4	121.7	1.1	3.9
Nonmanufacturing	116.0	118.3	118.9	120.1	120.7	121.3	122.1	122.8	124.1	1.1	2.8
Nonunion	112.2	113.7	115.2	116.7	117.8	118.8	120.4	122.1	123.4	1.1	4.8
Manufacturing	111.8	113.0	114.2	115.4	116.5	117.9	119.5	121.5	122.8	1.1	5.4
Nonmanufacturing	112.4	114.0	115.6	117.2	118.3	119.2	120.7	122.3	123.6	1.1	4.5
Workers, by region[1]											
Northeast	113.6	115.3	116.6	117.4	118.9	120.5	121.9	123.0	124.6	1.3	4.8
South	112.5	114.3	115.7	117.9	119.0	119.0	120.2	122.3	123.4	.9	3.7
Midwest (formerly North Central)	111.5	112.8	113.6	115.5	116.0	117.8	118.7	119.6	121.1	1.3	4.4
West	114.9	116.5	118.5	118.8	119.6	120.0	122.5	124.0	125.1	.9	4.6
Workers, by area size[1]											
Metropolitan areas	113.2	114.9	116.2	117.6	118.6	119.5	121.0	122.4	123.8	1.1	4.4
Other areas	111.4	112.3	113.4	115.1	116.0	117.5	118.3	119.6	120.6	.8	4.0

[1]The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see BLS *Handbook of Methods*, Bulletin 1910.

36. Wage and compensation change, major collective bargaining settlements, 1980 to date

[In percent]

Measure	Annual average					Quarterly average								
						1983			1984				1985[p]	
	1980	1981	1982	1983	1984	II	III	IV	I	II	III	IV	I	II
Total compensation changes, covering 5,000 workers or more, all industries:														
First year of contract	10.4	10.2	3.2	3.4	3.6	4.4	5.0	4.9	5.1	3.5	2.7	3.7	3.6	3.8
Annual rate over life of contract	7.1	8.3	2.8	3.0	2.8	3.6	4.3	3.1	4.7	3.2	3.1	2.0	3.1	3.5
Wage rate changes covering at least 1,000 workers, all industries:														
First year of contract	9.5	9.8	3.8	2.6	2.4	2.7	3.7	4.2	2.8	2.6	2.1	2.3	2.8	2.8
Annual rate over life of contract	7.1	7.9	3.6	2.8	2.4	2.8	3.6	2.8	3.3	2.7	2.6	1.5	3.0	2.9
Manufacturing:														
First year of contract	7.4	7.2	2.8	0.4	2.3	1.3	3.4	2.9	2.5	2.6	2.3	2.2	0.6	1.7
Annual rate over life of contract	5.4	6.1	2.6	2.1	1.5	.9	3.5	3.1	2.5	2.8	2.5	1.0	1.5	2.2
Nonmanufacturing (excluding construction):														
First year of contract	9.5	9.8	4.3	5.0	3.4	5.9	5.8	4.8	4.2	4.3	2.0	3.9	5.0	3.8
Annual rate over life of contract	6.6	7.3	4.1	3.7	3.8	5.2	4.3	2.7	4.8	4.2	2.8	3.8	4.5	3.5
Construction:														
First year of contract	13.6	13.5	6.5	1.5	.5	1.7	1.5	1.1	−3.6	1.1	2.0	−2.8	−1.1	1.5
Annual rate over life of contract	11.5	11.3	6.3	2.4	1.0	2.1	2.9	2.6	−2.8	1.4	2.1	−.8	.7	2.1

p = preliminary.

37. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1980 to date

Measure	Year					Year and quarter								
						1983			1984				1985[p]	
	1980	1981	1982	1983	1984	II	III	IV	I	II	III	IV	I	II
Average percent adjustment (including no change):														
All industries	9.9	9.5	6.8	4.0	3.7	1.3	1.2	1.1	0.9	0.9	1.2	0.7	0.7	0.8
Manufacturing	10.2	9.4	5.2	2.7	4.3	1.1	1.2	.9	1.2	1.0	1.0	1.1	.9	.6
Nonmanufacturing	9.7	9.5	7.9	4.8	3.3	1.5	1.2	1.2	.7	.9	1.3	.4	.6	1.0
From settlements reached in period	3.6	2.5	1.7	.8	.8	.3	.2	.6	.1	.1	.2	.3	.1	.2
Deferred from settlements reached in earlier period	3.5	3.8	3.6	2.5	2.0	1.0	.8	.3	.4	.7	.7	.2	.6	.5
From cost-of-living clauses	2.8	3.2	1.4	.6	.9	.1	.2	.2	.3	.2	.3	.2	.1	.1
Total number of workers receiving wage change (in thousands)[1]	—	8,648	7,852	6,530	6,195	3,061	3,025	2,887	2,694	2,482	2,386	1,850	2,024	2,258
From settlements reached in period	—	2,270	1,907	2,327	1,851	561	599	996	295	355	406	911	139	479
Deferred from settlements reached in earlier period	—	6,267	4,846	3,260	3,668	1,405	1,317	669	984	1,148	1,581	443	993	863
From cost-of-living clauses	—	4,593	3,830	2,327	2,518	1,299	1,218	1,290	1,459	1,151	1,215	1,070	1,018	947
Number of workers receiving no adjustments (in thousands)	—	145	483	1,187	1,123	4,656	4,693	4,830	4,624	4,835	4,932	5,467	5,061	4,827

[1] The total number of workers who received adjustments does not equal the sum of workers that received each type of adjustment, because some workers received more than one type of adjustment during the period.

p = preliminary.

WORK STOPPAGE DATA

WORK STOPPAGES include all known strikes or lockouts involving 1,000 workers or more and lasting a full shift or longer. Data are based largely on newspaper accounts and cover all workers idle one shift or more in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments whose employees are idle owing to material or service shortages.

Estimates of days idle as a percent of estimated working time measure only the impact of larger strikes (1,000 workers or more). Formerly, these estimates measured the impact of strikes involving 6 workers or more; that is, the impact of virtually *all* strikes. Due to budget stringencies, collection of data on strikes involving fewer than 1,000 workers was discontinued with the December 1981 data.

38. Work stoppages involving 1,000 workers or more, 1947 to date

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (in thousands)	In effect during month (in thousands)	Number (in thousands)	Percent of estimated working time
1947	270	.....	1,629	.....	25,720	—
1948	245	.....	1,435	.....	26,127	.22
1949	262	.....	2,537	.....	43,420	.38
1950	424	.....	1,698	.....	30,390	.26
1951	415	.....	1,462	.....	15,070	.12
1952	470	.....	2,746	.....	48,820	.38
1953	437	.....	1,623	.....	18,130	.14
1954	265	.....	1,075	.....	16,630	.13
1955	363	.....	2,055	.....	21,180	.16
1956	287	.....	1,370	.....	26,840	.20
1957	279	.....	887	.....	10,340	.07
1958	332	.....	1,587	.....	17,900	.13
1959	245	.....	1,381	.....	60,850	.43
1960	222	.....	896	.....	13,260	.09
1961	195	.....	1,031	.....	10,140	.07
1962	211	.....	793	.....	11,760	.08
1963	181	.....	512	.....	10,020	.07
1964	246	.....	1,183	.....	16,220	.11
1965	268	.....	999	.....	15,140	.10
1966	321	.....	1,300	.....	16,000	.10
1967	381	.....	2,192	.....	31,320	.18
1968	392	.....	1,855	.....	35,567	.20
1969	412	.....	1,576	.....	29,397	.16
1970	381	.....	2,468	.....	52,761	.29
1971	298	.....	2,516	.....	35,538	.19
1972	250	.....	975	.....	16,764	.09
1973	317	.....	1,400	.....	16,260	.08
1974	424	.....	1,796	.....	31,809	.16
1975	235	.....	965	.....	17,563	.09
1976	231	.....	1,519	.....	23,962	.12
1977	298	.....	1,212	.....	21,258	.10
1978	219	.....	1,006	.....	23,774	.11
1979	235	.....	1,021	.....	20,409	.09
1980	187	.....	795	.....	20,844	.09
1981	145	.....	729	.....	16,908	.07
1982	96	.....	656	.....	9,061	.04
1983	81	.....	909	.....	17,461	.08
1984	62	.....	376	.....	8,499	.04
1984 January	6	12	28.0	42.9	505.3	.03
February	3	13	9.4	42.4	379.5	.02
March	2	10	3.0	16.5	296.3	.01
April	7	13	28.5	38.4	657.3	.03
May	5	15	8.1	39.2	587.6	.03
June	5	14	23.7	45.9	761.1	.04
July	8	20	70.8	106.4	1,228.0	.06
August	5	19	24.2	103.9	1,634.5	.07
September	10	18	107.9	122.9	731.0	.04
October	4	16	18.0	39.6	562.1	.03
November	4	15	12.0	32.3	500.1	.03
December	3	13	42.5	59.0	655.8	.04
1985[p] January	2	9	4.7	16.0	278.3	.01
February	4	13	29.3	43.9	259.3	.01
March	4	12	15.2	48.2	698.5	.03
April	3	8	6.2	14.1	229.5	.01
May	2	8	6.9	14.8	203.3	.01
June	2	8	15.7	28.5	454.3	.02
July	9	13	52.3	60.2	500.2	.02
August	6	18	15.3	66.8	869.7	.03

p = preliminary.

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Atlanta, Georgia, Metropolitan Area, May 1985. Bulletin 3030-19, 41 pp., $1.75 (GPO Stock No. 829-001-00019-5).

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CPI Detailed Report. The June issue provides a comprehensive report on price movements for the month, plus statistical tables, charts, and technical notes. 144 pp., $4 ($25 per year).

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Employment and Earnings. The August 1985 issue covers employment and unemployment developments in July, plus regular statistical tables on national, State, and area employment, hours, and earnings. 143 pp., $4.50 ($31 per year).

Producer Price Indexes. The June issue includes a comprehensive report on producer price movements for the month and for the first half of 1985, a note on future changes in Producer Price Indexes for refined petroleum products, plus regular tables and technical notes. 173 pp., $4.25 ($29 per year).

U.S. Department of State Indexes of Living Costs Abroad, Quarters Allowances, and Hardship Differentials, July 1985. Tabulations computed and published quarterly by the Department of State for use in establishing allowances to compensate American civilian government employees for costs and hardships related to assignments abroad. The information is also used by many business firms and private organizations to assist in establishing private compensation systems. 7 pp., $2.75 ($10 per year).

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South Dakota, June 1985. 3 pp.
Tulsa, OK. June 1985. 7 pp.
Waterloo—Cedar Falls, IA. June 1985. 3 pp.
West Virginia. July 1985. 3 pp.
Yakima—Richland—Kennewick—Pendelton, WA-OR. July 1985. 3 pp.

BLS Reports

Employment in Perspective: Minority Workers, Second Quarter 1985. Report 723. 3 pp. Focuses on the incidence of voluntary part-time employment in 1984 among whites, blacks, and persons of Hispanic origin.

Other Summaries

Occupational Earnings in Selected Areas, 1985 (No. 1 of 3). Summary 85-9. 7 pp.

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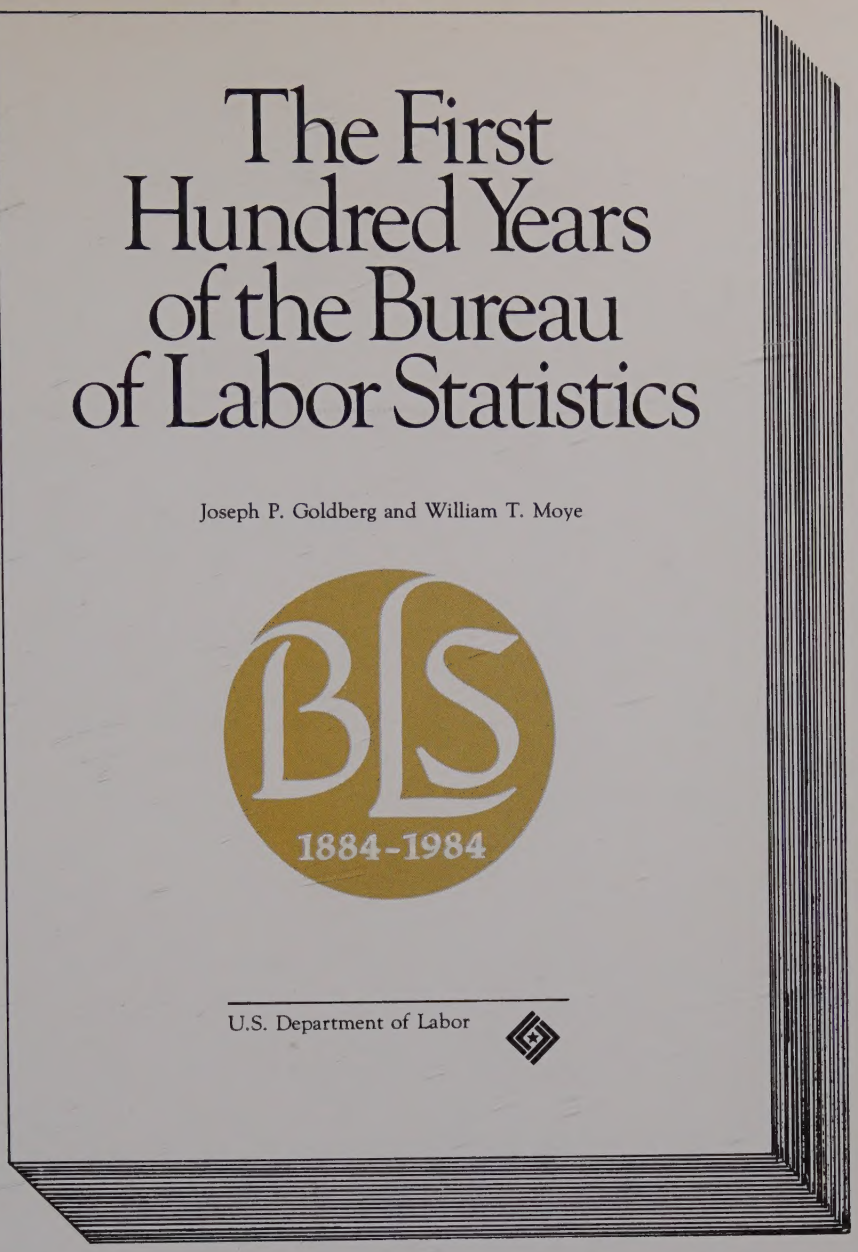
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Index

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